FORAGING WILD HERBS

30 HEALING PLANTS OF THE COASTAL CAROLINAS

April Punsalan

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Cover designer: Nicole Hayward

For my mother, Susan Pallette. Without you this book
wouldn't have been possible. I love you!

For Mrs. Betsy Spears, who ignited my passion for plants.

For my dear husband, Vasily Punsalan, and my sweet,
fun, loving daughter, Annarose Punsalan.
Thank you both for all your love and support.

Last but not least, this book is dedicated to you, the reader,
always honor your connection to the wild.

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Introduction

NEVER HAVE HUMANS been so disconnected from the Earth. Our fast-paced modern lives, snatch us away from that which brings us joy: nature. Shockingly we spend more than 90 percent of our time indoors, and science is showing that this separation from nature causes anxiety, depression, sleep disturbances, and a whole suite of psychological disorders. Our Western diet lacks the nourishment our bodies need to thrive. Wild herbs are the solution to these modern-day issues because wild herbs contain more vitamins and minerals, phytochemicals, chlorophyll, and antioxidants than conventional store-bought produce. By foraging wild herbs, you will, no doubt, improve your health–mind, body, and spirit.

The Carolina coast supports a rich assortment of common wild herbs. A wild herb is any useful plant that grows independently of human action in a natural or seminatural ecosystem. These wild herbs provide invaluable resources including food, medicine, fiber, and dyes. Unfortunately, many wild herbs are lost daily due to development and land conversion. This book aims to help protect wild herbs along the Carolina coast by teaching you how to form a relationship with them. Knowing, connecting and practicing with, and growing wild herbs is the key to their protection and yours.

Along the Carolina coast, we have 3,674 different vascular plant species—3,674! However very few botanists, herbalists, ethnobotanists, and others are tasked with determining which plants are edible and medicinal. We need more people, including you, to learn about wild edible and medicinal coastal flora. Thanks to Francis Porcher's book *Resources of the Southern Fields and Forests* we know that in the 1800s, as many as four hundred plants were

considered useful in the Carolinas. Indigenous medicine people knew and worked with these medicinal plants prior to European settlement. We need to make learning edible and medicinal flora a priority again before some of our most valuable plants disappear.

Due to the displacement of Indigenous people, only a handful of individuals in the United States now use wild herbs for food or medicine; this is minimal compared to developing countries, where 80 percent of the population uses wild herbs for food and healthcare. The low percentage of people practicing with wild herbs in this country may be one reason we have a health crisis. Wild herbs contain phytochemicals that protect the body from chronic diseases such as heart disease, diabetes, obesity, and cancer. We need a paradigm shift in the United States where we learn about, connect with, and use our native and nonnative naturalized flora for food and medicine. I hope this book creates a new standard where people regularly forage up to five to twenty wild herbs.

Foraging Wild Herbs covers more than thirty common native, naturalized, and nonnative wild herbs in depth. Although this book is focused on the Carolina coast, the majority of the herbs featured occur along the Southeastern Atlantic coast. Some of the wild herbs are coastal endemic species, such as yaupon (*Ilex vomitoria*), and others occur inland as well and have further reaching ranges, such as passionflower (*Passiflora incarnata*). For each plant, I include a botanical description and illustration, range, habitat, medicinal use and ethnobotany, examples of ways you can connect with each wild herb, wild herb gardening and landscape advice, and for many, I share my personal wild herb recipes. I want to inspire you to improve your health by connecting to and foraging wild herbs throughout the seasons. This book is not intended to prescribe medication or cure ailments. Instead let it serve as a guide to the wild herbs along the Carolina coast and a tool to bring you closer to nature.

This book is for anyone who loves nature, from amateur naturalists to skilled herbalists and foragers. It covers common native wild herbs but also includes nonnative invasive plants important for food and medicine. By foraging wild nonnative invasive herbs, you can reduce their spread and seed dispersal. No wild herbs mentioned herein are imperiled or threatened. The herbs in this book are common across the Carolina coast and are easily identifiable.

American beautyberry, an important indigenous herb along the Carolina coast.

It would be impossible to introduce this book without acknowledging the Indigenous people who have lived and still live along the Carolina coast. Prior to European settlement, Indigenous people—Tuscarora, Combahee, Sewee, Etiwan, Coree, Lumbee, Waccamaw, and Yemassee, to name a few groups—lived along the coast in the summers and migrated to inland forests in the winter. As they had intimate knowledge regarding hundreds of plants, settlers who came to the coast learned about edible and medicinal plants from them. Enslaved people of African descent learned about wild herbs from them as well. The Gullah-Geechee people, descendants of enslaved West Africans, still practice with several important native wild herbs, such as life everlasting (*Pseudognaphalium obustifolium*), that the Indigenous people hold sacred. Life everlasting was and is a sacred herb for several southeast Indigenous tribes. Although we don't know and may never know the historical indigenous use of many wild herbs because knowledge was shared orally, some were recorded by settlers. Pre-European settlement, approximately 60 percent of the Indigenous population's diet came from wild plants. Their connection to wild herbs made this book and many other ethnobotany books listed in the references possible. I am deeply indebted to the Indigenous people of the Carolinas, their relationship to the land, and their knowledge of wild herbs.

By the mid-1700s, most coastal Indigenous people in the region had lost their lives to European diseases and wars. Around 1750, few remained on the coast. Without the intimate connection between people and the landscape, the uses of wild herbs were forgotten. The remaining Indigenous coastal descendants are reconnecting and relearning their language and connection with wild herbs before displacement.

Many wild herbs occur across that coastal landscape that have a long use history. From early explorer accounts, we know that certain coastal wild herbs, such as passionflower and American beautyberry, flourished around coastal Indigenous communities and that the Indigenous people incorporated these important wild herbs into their lives for food and healing. These wild herbs remain across the landscape today and so do Indigenous coastal groups. Through our connection with coastal wild herbs and acknowledgment and support of coastal Indigenous tribes such as the Waccamaw and the Lumbee, we can slowly restore the lost connection between people and plants.

HOW THIS BOOK MANIFESTED

This book was born when I moved to Charleston, South Carolina, and didn't know any of the wild herbs present. Having connected deeply with Southern Appalachian herbs, I longed to find that same relationship in my new home. I started keying out wild herbs that got my attention, learning their names, researching their historical uses, and bringing them into my kitchen and apothecary. As a former botanist for the US Fish and Wildlife Service, I witnessed and faced habitat destruction from a bird's-eye view across the eastern and mid United States. For eight years, I faced and felt the negative effects of the growing disconnect between humans and nature. We, partners in plant conservation, feverishly worked to protect thousands of acres for federally endangered plants, but there was no human connection with the land. Outside of the few federally endangered plants that I worked to protect, I knew that there were hundreds to thousands of common useful plants being scraped from the Earth by bulldozers. I started to grow concerned about the future of these plants and the future of humans on this planet given the pace of habitat destruction. Each day I asked myself how do we stop this unprecedented rate of biodiversity loss? The answer was clear—*teach!* Eventually the whispers to teach grew too loud to ignore.

It was then that I found Porcher's legendary book *Resources of the Southern Fields and Forests* and discovered medical botany. After practicing with and obtaining in-depth knowledge of more than twenty wild herbs, I started leading foraging walks in Charleston. People were receptive and wanted to learn more. A positive reciprocal exchange rapidly grew between the knowledge shared and the community. I loved witnessing the reconnection between people and wild herbs so much that I formed Wild Herb Academy in 2021 (formerly called Yahola Herbal School). I formed the online school so I could teach people common wild herbs that occur across the globe. I still lead in person foraging walks in the Charleston area. Through Wild Herb Academy, I teach the public, anyone that wants to learn, how to improve the health of the mind, body, and spirit with wild herbs and share wild herb recipes, some even featured in this book. Students and members frequently asked if I had written a book or had any herbal guidebook recommendations. My favorite recommendation, Julia Morton's *Folk Remedies of the Low Country,* was out of print, so with the help of University of South Carolina Press Editor Aurora Bell, the encouragement of my mom, Susan Pallette, and that small inner voice, I wrote this book that you now hold in your hands: *Foraging Wild Herbs: 30 Healing Plants of the Coastal Carolinas.*

I hope this book helps you discover the valuable plants that grow in your backyard, the maritime forests, the marshes, and the beaches along the Carolina coast. The wild herbs in this book are like good friends; I have spent numerous hours watching them grow, making tea and crafts with them, rescuing them from developments, and planting them in the yard. You will know when you form an intimate relationship with a wild herb because the plant will care for you by soothing your nervous system or giving you something nutritious to eat, and you will allow it to flourish in the yard. You two will form a symbiotic mutualistic relationship. So, if you build one relationship with a wild herb, I view this book as a worthwhile endeavor.

PHYSIOGRAPHIC COVERAGE AND NATURAL COMMUNITIES

This text examines herbs along the Carolina coast from Carova Beach, North Carolina, to Daufuskie Island, South Carolina. North and South Carolina have four physiographic provinces that are divided based on their geology, soils, topography, and natural communities.

- Outer coastal plain
- Inner coastal plain
- Piedmont region
- Mountains

This book covers wild herbs frequently encountered along the outer coastal plain, which includes the maritime strand. I selected common coastal wild herbs that are: (1) easy to find, (2) easy to identify, and (3) offer benefits to humans. Some wild herbs, such as passionflower and lizard's tail, also occur in the inner coastal plain, piedmont, and mountain regions.

The outer coastal plain comprises barrier islands, sea islands, estuaries, and marshes. Compared to the sea islands, geologically, the barrier islands are relatively young, approximately five thousand to ten thousand years old, and consist of unconsolidated sand from the Holocene Period (11,700 years ago to date). Along the Carolina coast, the barrier islands form four capes extending into the Atlantic Ocean. From north to south, they are: Cape Hatteras (NC), Cape Lookout (NC), Cape Fear (NC), and Cape Romain (SC).

The outer coastal plain, constantly shifting and changing by the tides, wind, and sea, contains many natural communities that harbor some of the most resilient plants. They contain phytochemicals that protect them from the hot sun and salt aerosols. These protective phytochemicals make them some of the most useful wild herbs globally. You can find all the wild herbs covered in this book along the beaches, dunes, maritime grasslands, maritime shrub thickets, maritime forests, and palustrine wetlands and estuarine ecosystems. Below, I give a brief overview of coastal natural communities. I follow Paul Hosier's broad classification of natural communities detailed in his book *Seacoast Plants of the Carolinas.* If you can recognize which natural community you are in when you find a wild herb, it will help you relocate the plant the next time you forage.

COASTAL NATURAL COMMUNITIES

COASTAL BEACHES

Where the sea and unconsolidated sand meet, you have the beach. This natural community constantly changes with the tides, wind, stormwater, and inlet drainage and size. The constant shifting movement of sand and sea in the foreshore makes this an unstable environment for vegetation. Above the

Beach at Cape Hatteras, NC.

high tide line where detritus (driftline) and debris deposit, the backshore occurs. The backshore habitat extends from the average high tide to the base of the dunes. Although this habitat is a dynamic ecosystem, given its location above the high tide line, it doesn't fluctuate as much as the foreshore, so a few vascular plants can establish, such as southeastern sea rocket (*Cakile harperi*) and the federally endangered seabeach amaranth (*Amaranthus pumilus*). These plants are adapted to the occasional saltwater flooding from spring high tides, salt aerosols, and high solar radiation. As Southeastern sea rocket is a common wild herb along the backshore habitat, I cover it in this book. However because southeastern sea rocket and a few other plants help stabilize the sand in the backshore, I don't forage more than a few leaves. I love seeing these plants form little clumps along the backshore zone, and I don't want to interfere with their survival and fitness.

The damming of rivers, such as the Santee River, has affected the foreshore and backshore habitats of barrier islands along the Carolina coast. When rivers are left to run free, inlets continue to deposit large quantities of sand and silt. The continual influx of sand, silt, and clay helps maintain the barrier islands and allows them to accrete-grow naturally. Also, hard stabilization within inlet channels can cause chronic erosion of barrier islands south of the structures by decreasing sand deposits. The Charleston harbor jetties, maintained to keep the Charleston harbor open and navigable for

commercial container ships carrying goods, have resulted in the chronic erosion of Morris Island and Folly Beach. Some of the best barrier islands, such as Kiawah Island and Cape Hatteras National Seashore, occur at the base of undammed inlets without hard stabilization structures.

COASTAL DUNES

By far, my favorite natural coastal community is the dune ecosystem consisting of foredunes and backdunes. Foredunes, also known as primary dunes, form over time as sand driven by wind and sea accumulates landward of the high tide line. These dunes are closest to and run parallel to the shoreline. Plants in the foredune area, such as sea oats (*Uniola paniculata*), slow wind speed with their upright vegetation, and as wind speed slows down, sand deposits around the plant, and the roots stabilize the sand. Given their excellent ability to stabilize dunes, sea oats are a dominant keystone species of the Carolina coastal dune ecosystem. Harvesting the plant in South Carolina is illegal and walking across the dunes off-trail is restricted. As the dune system stabilizes, a diversity of grasses occurs, including dune sandspur (*Cenchrus tribuloides*), saltmeadow cordgrass (*Sporobolus pumilus*), coastal little bluestem (*Schizachyrium littorale*), and seashore dropseed (*Sporobolus virginicus*). Grasses are adapted to the harsh foredune habitat because their flexuous culms/leaves can withstand high winds, and they can survive burial by wind-driven sand.

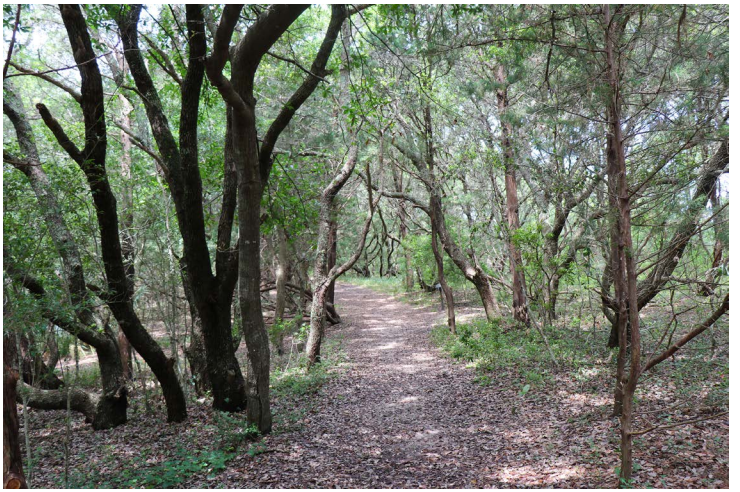
Vegetated foredunes are the first line of defense against storm surges from tropical storms. The foredune habitat is sensitive, especially where natural accretion, the process of sand accumulation as described above, is no longer occurring. The foredunes can erode as vegetation dies from high wind and sea velocity. Where natural accretion occurs, over time, new foredunes form, and what was once a primary dune becomes a secondary dune or backdune. Given that secondary dunes aren't exposed to the high wind and sea velocity, a higher diversity of herbaceous (nonwoody) wild herbs occurs, such as dune pennywort (*Hydrocotyle bonariensis*), dune camphorweed (*Heterotheca subaxillaris*), sand bean (*Strophostyles helvola*), spurred butterfly pea (*Centrosema virginianum*), and firewheel (*Gaillardia pulchella*). As dunes continue to build seaward, the backdune system becomes a maritime shrub thicket composed of many wild herb woody species. Wax myrtle (*Morella cerifera*), yaupon (*Ilex vomitoria*), and red bay (*Persea bor-*

Sand dunes of Cape Hatteras, NC.

bonia) are some of the most common woody wild herbs you will find in the maritime shrub thicket. You will know you are in the maritime shrub thicket when you hear the sounds of the ocean, but you see bonsai-looking stunted live oaks (*Quercus virginiana*) interspersed with woody shrubby herbs. Other wild herbs that you can find interspersed between the foredunes and backdunes include eastern horsemint (*Monarda punctata*), earleaf greenbrier (*Smilax auriculata*), eastern red cedar (*Juniperus virginiana*), and prickly ash (*Zanthoxylum clava-herculis*).

MARITIME FORESTS

The maritime forest is a climax community, meaning not changing substantially. A climax community has reached the "endpoint" of succession. You can find maritime forests along Carolina coast's barrier islands and barrier shores. Resilient evergreen oaks and pines, including live oak, laurel oak (*Quercus laurifolia*), sand laurel oak (*Quercus hemisphaerica*), loblolly pine (*Pinus taeda*), and slash pine (*Pinus elliottii*) compose the canopy. The subcanopy includes a diversity of evergreen and deciduous trees, including sassafras (*Sassafras albidum*), red bay (*Persea borbonia*), American holly (*Ilex opaca*), eastern red cedar (*Juniperus virginiana*), and grand magnolia (*Magnolia grandiflora*). Sometimes on sites with a higher pH, you can find witch hazel (*Hamamelis virginiana*) and American beech (*Fagus grandiflora*)



Maritime forest at Buxton Woods Trail, Cape Hatteras, NC.

growing in the maritime forest subcanopy. The shrub layer contains some of my favorite wild herbs, including the gorgeous American beautyberry, yaupon, and wax myrtle. Often, especially in South Carolina, saw and dwarf palmetto dot the understory. The herbaceous wild herbs are sparse, except when a forest gap opens. You can usually find the wild herb partridgeberry (*Mitchella repens*) growing along the forest floor. If you look up into the trees, you will notice a diversity of wild vines, including muscadine (*Muscadinia rotundifolia*), greenbrier (*Smilax* spp.), and, where soil moisture levels are higher, supplejack vine (*Berchemia scandens*). In the maritime forest, along the coast of South Carolina, Spanish moss (*Tillandsia usneoides*) hangs from the branches of trees, especially the live oaks.

The maritime forests are gorgeous natural communities to hike through, given the sparse shrub and herbaceous layer. Majestic live oaks with wide-spreading branches adorned with silver sprays of Spanish moss against a backdrop of palms and fragrant shrubby wild herbs make the maritime forest a dreamy natural community to visit. The maritime forests that we see today are secondary forests. Unfortunately, in the 1700s and early 1800s, most, if not all, of the live oaks in maritime forests were logged to make wooden sailing vessels. After the invention of iron and steel ships in the early 1800s, live oaks weren't overharvested anymore. However maritime forests have faced another threat and that threat continues today: development.

Coastal environments, especially barrier islands, are highly desirable places to live, and maritime forests provide high and dry areas protected from the sea. Thousands of mature maritime forests have been cleared for residential and commercial property. Thankfully in Charleston you must obtain a permit to clear or remove any tree measuring twenty-four inches greater in diameter at four and a half feet above the grade diameter at breast height except for pine or sweet gum. This requirement has protected many live oaks from being removed. Every coastal town should adopt the same rule to protect live oaks and associated maritime forests.

COASTAL WETLAND NATURAL COMMUNITIES

SALTMARSH

Saltmarshes occur on the landward side of barrier islands at the mouths of coastal rivers, such as the Albermale, Pamilico, and Cape Fear Rivers in North Carolina, and the Wando, Cooper, Ashley, Stono, Ashepoo, and Combahee in South Carolina. These marshes are saltwater because they are inundated by saltwater at full salinity twice daily, with salinity levels ranging from eighteen to thirty-five parts per thousand (ppt). Freshwater from the rivers and rainfall enter the interwoven creek system, producing a wide variety of salinity ranges. The incoming freshwater carries silt that builds the marsh soils and creates the soft marsh substrate known as pluff mud. As the tide recedes, sand, silt, and clay are left on the channels, forming the tidal creeks. Due to the salinity range and constant fluctuation of wet to dry, the overall plant diversity is low within saltmarshes, often consisting of one plant species, smooth cordgrass (*Spartina alterniflora*). However you can find several of the wild herbs covered in this book, such as sea myrtle (*Baccharis halimifolia*), seaside oxeye (*Borrichia frutescens*), and eastern red cedar (*Juniperus virginiana*), along the upland edges of saltmarsh habitat. If you live along the coast of South Carolina, you can easily find saltmarsh habitat: Two-thirds of the wetland communities in South Carolina are saltmarsh. In North Carolina, saltmarsh habitat occurs, but brackish marshes are more common than saltwater.

BRACKISH MARSH

Brackish marshes occur at the mouths of coastal rivers when there is more freshwater influx in comparison to saltwater. Tidal inundation here occurs

Brackish marsh at Nags Head, NC.

less than once per day, and few tidal creeks develop because less tidal water moves on and off the marsh. The salinity of brackish marshes ranges from 0.5 to about 18 ppt. With less tidal inundation and greater freshwater levels, plant diversity in brackish marshes is higher than saltwater marshes, especially on the landward side where a whole suite of wild herbs grow. Plant diversity tends to be high because freshwater and saltwater plants can be found. In open water leading to the land, black needlerush (*Juncus roemerianus*) dominates large expanses of open water. The landward side of a brackish marsh is a botanical playground composed of salt-tolerant wild herbs and freshwater wetland herbs, and given the disturbance and development along the brackish marshes, such as the Albemarle Sound, there are many common "weedy" wild herbs. You could likely find many of the wild herbs covered in this book along the landward sides of brackish marshes, including:

- Carolina willow (*Salix caroliniana*)
- Dune pennywort (*Hydrocotyle bonariensis*)
- Eastern red cedar (*Juniperus virginiana*)
- Lamb's-quarters (*Chenopodium album*)
- Red bay (*Persea borbonia*)
- Saltmarsh fleabane (*Pluchea odorata*)
- Sea myrtle (*Bacchairs halimifolia*)

- Wax myrtle (*Morella cerifera*)
- Yaupon (*Ilex vomitoria*)

FRESHWATER DEPRESSIONAL WETLANDS, DUNE SWALES, AND INTERDUNE PONDS

Freshwater depressional wetlands are less widespread than the salt and brackish marshes of the coastal Carolinas likely due to development and ditching along the coast. Freshwater depressional wetlands are isolated wetlands in low-lying areas surrounded by uplands. For example, interdune swales and ponds occur near inlets where the natural accretion of dunes leaves behind topographical depressions between the dune systems. Interdune swales are smaller in size than interdune ponds and contain a diversity of wild herbs. Along the upland edges of the swale, you can find woody wild herbs such as wax myrtle, sea myrtle, and eastern red cedar. Also you can find a diversity of herbaceous plants that prefer moist, sandy soil such as common germander and smooth spiderwort. In the deeper saturated sections of the swale, you can find Carolina willow and bald cypress.

In South Carolina, I recommend hiking the Sullivan's Island Nature Trail at station 16 Walking along the trail, you will notice the variation in topographic relief, going from the upland dune system habitat to lower lying areas saturated with freshwater. The interdune swales, combined with the accreting dune systems, make the Sullivan's Island Nature Trail my favorite place to visit and botanize.

When the depression between dune systems is deeper and consistently saturated, an interdune pond will occur. Interdune ponds typically have standing open water habitat and therefore can support plants that are "water loving" and have adapted to live in low-oxygen (anaerobic) conditions, known as hydrophytic plants. Hydrophytic plants that you might encounter include common duckweed (*Lemna valdiviana*), dotted smartweed (*Persicaria punctata*), and the nonnative invasive plant water hyacinth (*Eichhornia crassipes*). Along the landward edge of the pond, you may find other freshwater-loving plants such as cattails (*Typha latifolia*), eastern rose mallow (*Hibiscus moscheutos*), Carolina willow (*Salix caroliniana*) and bald cypress (*Taxodium distichum*).

Farther inland from the barrier islands, in the pine hardwood forests, are forested swamps. These forested swamps form in depressional areas and can

occur along slow-flowing freshwater creeks. You will find my favorite wild herb, lizard's tail (*Saururus cernuus*), and other wild herbs, such as bugleweed, in the forested swamps of the coastal Carolina.

RECOMMENDED NATIONAL FORESTS, NATURE PRESERVES, AND STATE AND COUNTY PARKS TO VISIT

FRANCIS MARION NATIONAL FOREST (SC)

In South Carolina, one of the best places to visit, botanize, and forage is the Francis Marion National Forest, especially since foraging for personal use is allowed in the forest without a miscellaneous forest products permit. However, if you want to collect wild herbs, I recommend calling the Francis Marion ranger station to get permission and let them know your plans. I was told that I could collect yaupon and other common wild herbs for personal use without a permit. All the wild herbs covered in this book are common, except prickly ash. In the Francis Marion National Forest, you couldn't dent the population of any of the wild herbs covered in this book. I recommend foraging woody wild herbs along Awendaw Passage, a section of the Palmetto Trail. This section of the Palmetto Trail is just over seven miles long and starts at the end of Rosa Green Road and ends at Buck Hall boat landing. You will pass through a maritime forest with scenic overlooks of a Lowcountry saltmarsh along Awendaw Creek. You can easily find there many of the woody wild herbs featured in this book, including American beautyberry, bald cypress, eastern red cedar, red bay, sea myrtle, yaupon, and wax myrtle. Another easy trail to access is the Sewee Shell Mound Interpretive Trail. This easy one-mile trail leads to a boardwalk that overlooks a prehistoric shell mound with breathtaking views of the saltmarsh, tidal creek, and intracoastal waterway. As this is a sensitive site dating back four thousand years, I don't recommend collecting any wild herbs. There is plentiful yaupon along the trail before the boardwalk, with large leaves likely from the high calcium and magnesium content of the soils from the shell mound. Also, American beautyberry occurs along the trail.

SULLIVAN'S ISLAND NATURE TRAIL (SC)

The Sullivan's Island Nature Trail is my favorite trail because it transects various coastal natural communities, including foreshore and backshore

Sullivan's Island Nature Trail at 16 station.

beaches, foredunes and backdunes, maritime grasslands, maritime shrub thicket and maritime forest. The nature trail is on a 190-acre tract of accreted land from station 12 to station 29. The trail includes benches, boardwalks, observation decks, and beach access points. The boardwalk borders the maritime shrub thicket and grasslands. At the observation deck, you can see large swaths of dune camphorweed, firewheel, Eastern horsemint (*Monarda punctata*), and small scattered clumps of life everlasting. The trail contains almost all the wild herbs covered in this book. I highly recommend hiking the Sullivan's Island Nature Trail with this field guide in hand. I love to visit the trail during all seasons, but I especially enjoy visiting in the fall from September through November because dune camphorweed, eastern horsemint, and life everlasting are in full bloom, there aren't many biting insects, and the weather is usually mild and gorgeous. You access the trail on 16 station and can park off Poe Avenue.

BUXTON WOODS TRAIL, CAPE HATTERAS NATIONAL SEASHORE (NC)

The Buxton Woods Trail is a three-quarters-mile loop located in the Cape Hatteras National Seashore in North Carolina. The trail is located off Lighthouse Road, and the trailhead is near the Buxton Woods picnic area. I recommend hiking this trail before or after taking a swim at the beach. Have lunch

in the shade at the picnic area and then hike the trail. I love this trail because it crosses through mature maritime forests situated on east-to-west ancient dunes that are considered "relic" dunes because they formed thousands of years ago when the sea, winds, and shoreline patterns were different. Most sand dunes run north to south. The trail winds through mature maritime forest consisting of live oaks (*Quercus virginiana*), sand live oaks (*Quercus hemisphaerica*), red mulberry (*Morus rubra*), ironwood (*Carpinus caroliniana*), and shrubby woody plants such as wax myrtle, swamp bay, American beautyberry, and yaupon holly. At the beginning of the loop trail, you walk across a boardwalk that provides excellent views of an interdune pond full of sedges; these marsh communities are known locally as "sedges."

HOW TO IDENTIFY PLANTS

Each time you identify and learn the name of a new plant, you uncover a treasure. There is a reason why you are curious about the plant, that goes beyond your intellect and comes from your heart and intuition. The name is the first thing you must learn to foster the relationship between you and the plant—same as when you meet a new person for the first time and strive to remember their full name. I highly recommend learning the plant's Latin scientific name because you have a strong desire to learn wild herbs. I know this because you are reading this book. If you only remember the plant's common name, you will only know the plant's nickname. Learning a plant's scientific name is the same as learning a person's first and last name. As the wild herbs in this book, and most plants across this globe, are important food and medicine for humans, you want to recall their first and last name. The first part of the name is called the genus name, which the first letter is always capitalized. The second part of the name, the specific epithet, is always all lowercase. For example, red bay's scientific name is *Persea borbonia*. *Persea* is the genus name and *borbonia* is the specific epithet. A plant's Latin name is always italicized or underlined. Aim to know the wild herb you are connecting with well by knowing its first and last name, the scientific name. If you do this, you can communicate and compare how people use wild herbs across the globe.

Plant identification is a skill that develops over time. Like any other skill, you must practice regularly to build confidence. If the plant in question is flowering, you can confidently learn its name. You can teach yourself field

botany and wild herbs with the help of field guides, floras, plant identification books, and botany terminology dictionaries. Thumb through the field guides, such as this one, and when you see a plant you know, read the botanical description of the plant. Study the botanical features highlighted in the field guide. By reviewing the features of wild herbs you already know, it will help you become more proficient in field botany overall. The identification of a plant can involve minute features hard to see with the naked eye, such as hairs on the underside of a leaf or scales, so a 10× to 15× magnification hand lens is essential for keying out plants. I also have a dissecting scope that is irreplaceable. It makes keying out plants easier, and plus, I enter into a botanical museum every time I place a flower or leaf under magnification.

There are many free field botany resources online; for example, you can download and borrow free botany dictionaries on archive.org, including *Plant Identification Terminology: An Illustrated Glossary* by James G. Harris, and Melinda Woolf Harris. However, if you want to learn field botany, I highly recommend purchasing your own plant identification terminology book. Below, I cover foundational field botany concepts to get you started.

The first question you want to ask yourself when you find an interesting wild herb in the field, is whether the plant you want to identify is a tree, a shrub, or an herbaceous plant. If it is an herbaceous plant, is it an annual or a perennial? An annual plant completes its life cycle in one year whereas a perennial plant comes back each year.

- **HERBACEOUS.** Any vascular plant without woody tissue, examples include passionflower and dune pennywort.
- **SEMI-WOODY.** Vascular plants that are not woody but do have lignified (rigid) stems that appear woody. Examples include silver seaside oxeye (*Borrichia frutescens*) and the flowering stalks of many asters and goldenrods.
- **WOODY.** Any vascular plant that has woody tissue and a hard stem. Most woody plants are trees, shrubs, or lianas, also known as vines. Examples include bald cypress and grand magnolia.

Next, you want to home in on the leaves because many times when you meet a plant for the first time, the only thing present will be the leaves. If you master basic leaf terminology, this will help you *confidently* identify wild herbs. When I approach a wild herb for the first time, I immediately look at

American beautyberry displaying opposite leaf arrangement.

the leaf arrangement and leaf shape. Then, I look to see if there is any serration along the leaf margin and look to see if the leaf is hairy. The main types of leaf arrangement are:

- **OPPOSITE.** Along the stem, the leaves come out opposite each other. Examples include maple, dogwood, chickweed, Florida betony, American beautyberry.
- **ALTERNATE.** Leaves come out alternate of each other along the stem. Examples include wax myrtle, yaupon, thorny olive.
- **WHORLED.** Four to seven leaves come out at a single node along the stem, encircling the stem in a whorled fashion. Examples include cleavers.
- **BASAL ROSETTE.** Leaves arise from an underground modified stem and hug the earth; the leaves do not come out along an aboveground stem. Examples include dandelion (*Taraxacum officinale*) and common blue violet (*Viola sororia*).
- **SUBOPPOSITE.** Leaves come out almost directly adjacent to each other.

Refer to a plant identification guide, such as the one referenced above, to learn leaf shapes, and leaf serration and vestiture types.

HOW TO USE THIS GUIDE

Use this guide to identify common wild herbs along the Carolina coast. Many of the herbs featured herein are common, widespread, and easy to find. Use the hand-drawn images by Carol Marinelli, photographs (taken by me, unless otherwise noted) and the species description to confirm plant identification. Throughout this book the terms "foraging" and "wildcrafting" are used interchangeably. The definition of foraging is the gathering of wild food and medicine from one's surroundings, whereas wildcraft is defined as gathering herbs, plants, and fungi from the wild. These terms are similar, however, and I have noticed that many herbalists use the word wildcraft, whereas wild food enthusiasts use the word forage. Nevertheless, both terms refer to the same practice: collecting wild herbs for food and medicine from nature.

The bulk of this book consists of species profiles, each of which includes the following sections:

SPECIES NAME

The species profiles are organized alphabetically by common name. However, along with my previous advice, I encourage you to learn the Latin name of each species especially because common names often vary depending on the region or the area. For example, lamb's-quarters (*Chenopodium album*) is also known as poor man's spinach and pigweed. However, the Latin name for lamb's-quarters will stay the same no matter where you live or travel.

OTHER COMMON NAMES

When applicable, this section lists other known common names for the wild herb, such as lamb's-quarters also known as pigweed.

FAMILY

For each herb, I list the family to help you recognize patterns in common plant families such as the mint (Lamiaceae), pea (Fabaceae), and aster (Asteraceae) families. By recognizing plant family patterns, your botanical skills and confidence level will increase exponentially. For example, several of the wild herbs in this book are in the mint family. The wild herbs in the mint family have a square stem, opposite leaves, and an asymmetrical/irregular flower type consisting of fused petals.

MEDICINAL PART

This section refers to the part of the plant used for medicine, such as the leaves, roots, flowers, or fruit. As a plant conservationist, I always recommend using the leaves and stems before the roots.

EDIBLE PART

Where applicable, the edible part of the plant is listed.

SOLVENT

The solvent refers to what menstruum (water, alcohol, oil, or glycerin) extracts the plant's essence (phytochemicals, oils, vitamins, minerals) the best.

PROPERTIES

This section lists the herb's main properties regarding how it influences the human body. For example, is it an anti-inflammatory, immune stimulant, or an antimicrobial herb? Review the section "Herbal Actions and Properties" to get acquainted with these terms and to use as a reference.

WARNINGS

When applicable, I include any warnings or implications to consider when working with a particular herb.

IDENTIFICATION

This section includes the most important botanical features of the herb for accurate identification. Even if you know the plant, I recommend reading this section to familiarize yourself with the botanical characteristics: leaf structure, arrangement, and flower and fruit morphology. Read this section thoroughly to be 100 percent positive that you have the correct identification. I recommend starting slowly and working with only one to three wild herbs at a time. Always remember, *it's not how many wild herbs you know, it's how well you know each one.* Use a plant identification terminology book to accompany this field guide. My favorite is the *Plant Identification Terminology: An Illustrated Glossary* by James G. Harris and Melinda Woolf Harris, which I previously mentioned.

RANGE

The range includes where the wild herb grows geographically throughout North America and beyond. I used Alan S. Weakley's *Flora of the Southeastern United States* as a source for the range.

HABITAT

This section includes information on the species' habitat and where to search for these wild herbs.

HARVEST SEASON

When to forage and harvest the herb.

MEDICINAL USE

I include the ethnobotany, traditional use, molecular science known for each wild herb and my personal experience working with each wild herb in this section.

GARDENING AND LANDSCAPING

As my garden contains approximately 90 percent wild herbs, in this section, I share how you can incorporate wild herbs in your own garden.

WILD HERB RECIPES

For more than twenty wild herbs, I include a favorite recipe, which I hope inspires you to bring wild herbs into your kitchen and home.

HOW TO CONNECT WITH THE HERB

In this section, I list easy ways to connect with the wild herb based on my experience. I use the word connect so we can focus on building a relationship with plants instead of viewing nature as a commodity. I also provide fun ways to incorporate wild herbs into your daily life through herbal crafts and food.

SOURCES

References consulted for each species appear at the end of the book.

ETHNOBOTANY

Ethnobotany is the study of the interwoven relationship between people and plants. Humans (*Homo sapiens*) have coevolved with plants since time immemorial. We interact together, respond evolutionarily to each other, and influence each other's biological fitness. As a result, our lives are deeply intertwined. Ethnobotanical research focuses on how people use plants for food, medicine, fiber, shelter, dyes, and crafts. As our lives deeply depend upon plants, ethnobotany is an invaluable field.

Due to agriculture, the displacement of Indigenous people, the industrial revolution, modern medicine, and grocery stores, traditional knowledge of wild plants has dramatically decreased. With the voluntary and involuntary movement of humans across the globe, the connection between local plants and the area's human population has weakened. Elders carry and pass on the knowledge of edible and medicinal plants orally; when they pass, the traditional knowledge often dies. My friend, medicine man, and Gullah descendant Jalen Gordon says that when an elder passes away, a library is also destroyed. Younger generations rarely undertake the path of becoming a traditional medicine man or woman, especially given the lack of support in this country for ancestral medicine. Ethnobotanical research helps ensure that the knowledge that took ages, possibly thousands of years to obtain, is not lost forever.

During these studies, a delicate balance is required between preserving traditional knowledge and honoring intellectual property. Thankfully, researchers today find ways to compensate for and to honor a participant's time. This can include offering a fair payment, co-authorship, or formal acknowledgment, ensuring that communities benefit directly from sharing their cultural and ecological wisdom. There is currently a solid need to synthesize, compile, and analyze the vast amounts of ethnobotany data already recorded by family, genus, and species across the globe. There may and likely will come a time when the knowledge of medicinal and edible plants is desperately needed.

We need more trained ethnobotanical professionals recording and teaching common wild herbs that are edible and medicinal before the knowledge is lost. Given the high resource input needed and the unsustainable practices of monoculture agriculture and husbandry, we can't rely 100 percent on these systems in the future. Instead, we need to allow the edible and medic-

inal plants that grow freely in our yards to flourish. Because wild herbs are locally adapted to ecological conditions, they don't need additional water or nutrients from humans to grow. Not to mention, they are the most nutrient dense and sustainable food we can eat. For example, while store-bought grapes are bred mainly for sweetness and appearance on the shelf, wild muscadine grapes contain up to forty times more antioxidants (especially resveratrol and ellagic acid), making them far more protective for our health than store-bought grapes. If we can safeguard the edible and medicinal wild herbs in our landscape, we can reduce our dependency on the grocery store and greatly improve our health. By studying ethnobotany, I have been able to learn many edible greens that are traditionally eaten in India, Iran, Italy, China, and Turkey, and so forth. I often eat one to two cups of wild greens daily and often don't step foot in a grocery store, except once per week. Learning ethnobotany is a starting point when working with wild herbs, not the end. The only way to learn a wild herb is by safely working and connecting with it. You want to make each wild herb a plant ally, a friend, and know the plant intimately in the field and your kitchen. Always remember it's not how many wild herbs you know, it's how well you know each one. This book includes the ethnobotany for each plant so you know how it was traditionally used throughout time and for you to gain an appreciation for the breadth of each wild herb.

LOSS OF COASTAL LANDSCAPES AND BIODIVERSITY

This book aims to bring awareness to the native wild herbs that are disappearing across the Carolina coast due to commercial and residential development. The Carolina coast, is not only a biological hotspot, meaning there is a high diversity of wild plants, birds, and animals, but it is also one of the most desired places to live in the United States. Before development, many wild herbs occur on vacant lots. In fact, vacant lots are my favorite place to forage. Usually after a lot is sold and residential or commercial development scheduled, the entire lot is scraped by a backhoe or bulldozer. Often the grader that the contractor hires leaves zero native vegetation behind, unless the homeowner demands that only the home's footprint be scraped bare. After the complete removal of native vegetation and wildlife habitat, an instant monoculture lawn is established. The lawn with no edible, medicinal, or wildlife value takes the place of a diversity of wild herbs that provided

innumerable benefits. Next, nonnative shrubs and trees are planted, and the foreign landscape offers little to no value to wildlife or the new homeowners. If natives are planted, it is often only two to three clumps, and the overall wildlife value was still greatly reduced. Often the nonnative plants chosen need water and nutrient input to live along the coast. Nonnative ornamental plants are, as Doug Tallamy, explains "like statues in the landscape." They may be attractive, but they provide no wildlife value. *We can't continue this paradigm.* Something has to change. If you are a homeowner, please allow at least one or two native wild herbs to grow in your yard. After all, your yard is an area of land that you borrow for a short time span from Mother Nature. I am confident that this book will help you identify wild herbs that may be already growing in your yard. My yard is 95 percent native wild herbs. I chose to coevolve with these wild herbs, and we interact daily. I couldn't imagine my life without daily wild herb interaction. For example, I harvest and eat passionflower leaves, wild lettuce, and eastern horsemint leaves; Florida wood betony roots; and passionflower, southern dewberry, muscadines, and American beautyberry fruit, to name a few. I want you to know that if you protect the wild herbs in your landscape, they will protect you and bring a plethora of wildlife to your yard, such as caterpillars, butterflies, birds, and bees.

This book will help you reduce your negative environmental impact. For example, instead of going to the grocery store when you run out of greens, you may find yourself walking around your yard, basket in hand, and foraging wild greens such as lamb's-quarters (*Chenopodium album*), wild lettuce (*Lactuca* spp.), or common violet leaves (*Viola sororia*). Instead of purchasing culinary herbs from the grocery store, you can forage your own, using red bay leaves in place of common bay leaves and eastern horsemint instead of oregano. The more you connect deeply with the wild plants around you, the less you will want to plant nonnative plants from nurseries. When the mind, body, and spirit are satisfied, nothing else is needed. As a result, your needs will become simpler, your footprint on the Earth lighter, and the world a more vibrant place to live.

FORAGING ETHICS AND AWARENESS

The number one foraging rule is: Never take more than you need. Although the wild herbs discussed in this book are common, I still recommend forag-

ing with awareness, respect, and gratitude. Many cultures worldwide practice reciprocity by expressing gratitude for the plant in some shape or form before harvesting, whether it be offering a prayer, water, herb, or song to the herb. Always view and connect with the plant before snipping away; for example, is there an area of the tree that needs to be pruned or any crossing branches? If so, those are the first items to forage. Try not to forage the main photosynthetic branch or part of any wild herb. Generally I always only forage a handful of anything. I try not to forage more than can fit in my own two hands or a small basket. I prefer to forage daily because it ensures I return to Eden and that I don't waste the abundance of nature.

FORAGE SAFETY

Most of us live in a polluted environment and our food, especially nonorganic, has been exposed to chemicals. So although I never recommend foraging where you know herbicides, pesticides, and insecticides have been used within the last several years or are being used, I am also a more liberal forager than most. Many herbalists recommend never foraging along a road. However, if you know the road is maintained by mechanical equipment and it's a secondary road in a neighborhood, it is likely safe to forage along the roadside. Just be mindful of domesticated pet waste, try to forage where there aren't dogs walked regularly. Conventional food and produce are more contaminated from broadcast glyphosate herbicide application than any wild herb you could forage. For example, pounds of glyphosate are broadcast sprayed, four times per year, on nonorganic wheat, corn, and soybeans, and many other conventional produce. The produce is exposed to so much glyphosate that now we have genetically modified glyphosate-resistant corn, wheat, and soybeans. So, I recommend not letting fear of wild herb chemical contamination stop you from foraging; your body needs the phytochemicals.

ROADSIDES AND POWERLINE RIGHTS OF WAY

Be mindful of the vegetation maintenance where you live and forage. For instance, powerline corridors and primary roads are often sprayed with herbicides to discourage woody shrubs and trees. Utility companies cannot allow large woody shrubs and trees to touch electric lines for safety and reliability reasons. Historically most utility lines were maintained by manual methods, brush cutters, and mowing. During that time, many rare plants

and common wild herbs grew within powerline corridors due to the high sunlight. Now most utility companies contract the maintenance of their powerline rights of way out to herbicide crews that come in and broadcast-spray woody plants. It is disheartening because many rare and useful plants grow underneath these utility rights of way. It is a nationwide crisis that desperately needs to change; manual maintenance needs to be encouraged again to support biodiversity. I *highly discourage* foraging underneath powerline rights of way. However, I do encourage seed collection of wild herbs in late summer and fall underneath utility lines.

Broadcast herbicide use causes large swaths of vegetation to turn from green to brown. So, if you see large areas of dead, brown vegetation along the roadside, that means herbicides have been sprayed. Find a safe area to forage in your community. You don't have to go to a pristine forest to forage. Most of us live in a disturbed, fragmented habitat. So why not forage where we live?

Roadsides are similar to powerline rights of way in that they have to be maintained and kept open for safety reasons. The ongoing maintenance creates open, sunny conditions. As a result, many wild herbs thrive along the roadside. In Charleston I have found that secondary roads in some neighborhoods are mowed, whereas, in other areas, they are sprayed with herbicides. Therefore, you must pay attention, observe, and determine if you can safely forage along your secondary and neighborhood roadsides.

Another item to remember when foraging along roadsides is dog feces and urine. If you harvest herbs from a roadside, don't forage the wild herbs directly adjacent to the roadside, where a dog may have defecated. Instead forage ten to fifteen feet into the right of way, where the dog owner probably didn't let the dog wander. Triple rinse and maybe even wash the herbs before using. I forage along secondary roads maintained by mechanical mowing in neighborhoods. I am mindful of dog urination and often will only forage wild herbs above waist height or I will collect seeds to grow the plant in my yard. Also, I triple rinse any wild herbs collected along secondary roads. When I analyze the risk versus the benefit of foraging along secondary roads, I believe the benefit outweighs the risk.

I recommend becoming familiar with the wild herbs growing along the roadsides in your neighborhood. Then decide which ones you want to learn and connect with. You can collect seeds, stem cuttings, or—for ubiquitous weedy plants—dig up one or two to take to your yard.

Flowering coral bean (*Erythrina herbacea*) and coral bean seeds.

POISONOUS PLANTS

Along the Carolina coast, there are far more useful herbs than poisonous plants. Don't allow the fear of picking something poisonous stop you from interacting with nature. Instead learn about the toxic plants. Some plants contain parts that are nonpoisonous, such as pokeberry, which has edible young leaves when thoroughly boiled but poisonous fruit and roots. Make sure you know which part of a plant is poisonous.

Below, I cover six common poisonous plants that occur along the Carolina coast. Always be 100 percent sure of the plant identification before ingesting anything. Do not rely solely on plant identification apps. From my experience, plant apps are right approximately 60 percent of the time. My favorite plant app is Picture This.

CORAL BEAN (*ERYTHRINA HERBACEA*)

Coral bean is a perennial herb in the pea (Fabaceae) family with alternate, trifoliate leaves with entire margins. Coral bean has showy red flowers that emerge before the leaves, from May to July. The flowers mature into a dry

Eastern poison ivy (*Toxicodendron radicans*).

dehiscent seed pod/legume characteristic of the pea family. The common name, coral bean, speaks to the brilliant, red-colored seeds that can be used to make jewelry.

The seeds and bark contain alkaloids that cause death if ingested. If you work with coral bean seeds, be extremely careful.

RANGE. Southeast North Carolina, south to Florida, and west into Texas.

HABITAT. Dry sandy woodlands, maritime forests, and sandhills in the outer coastal plain.

EASTERN POISON IVY (*TOXICODENDRON RADICANS*)

One of the most frequently encountered poisonous plants is poison ivy. Leaves of three, let it be. Poison ivy is a woody vine with three leaflets per leaf (trifoliate) that have deep venation and entire to slightly serrated leaf margins, near the leaf apex. You can identify poison ivy climbing on trees during the winter by the aerial hairy rootlets. The leaves turn an orange-to-reddish color in the fall.

The plant's sap contains urushiol, a clear liquid that causes an itchy, painful inflamed rash. Most people get contact dermatitis from urushiol.

RANGE. Eastern and central United States and into Canada.

HABITAT. Disturbed areas, open areas, brackish marshes, mesic forests.

Fruiting pokeberry (*Phytolacca americana*).

POKEBERRY (*PHYTOLACCA AMERICANA*)

Pokeberry is a perennial herb that can grow three to ten feet tall. Look for alternative, entire leaves that have an unpleasant smell. The tiny, five-petaled white flowers form a raceme and mature into attractive reddish-purple berries. (A raceme is an inflorescence type where the flowers are arranged along a central axis and each flower has a pedicel, or stem.) The seeds within the berries and the roots are highly poisonous. Pokeberry is hard to mistake. Some foragers eat the young leaves of pokeberry after boiling out the alkaloids one or three times before ingesting them. All parts of the plant are poisonous, so I don't recommend trying to eat any part of the plant unless you are a skilled forager collecting the young leaves. I extract the purplish juice from the fruit to use as a dye and for watercolor, but I am cautious while handling the seeds, as they (along with the roots) are highly poisonous.

RANGE. Eastern North America.

HABITAT. Disturbed areas in urban, suburban, and agricultural areas.

POISON HEMLOCK (*CONIUM MACULATUM*)

Poison hemlock is a nonnative plant from Europe, Africa, and Asia. It belongs to the same family as water hemlock; it has white flowers with five petals arranged in an umbel inflorescence and grows three to eight feet tall and has

three to four times pinnately compound leaves. The leaves clasp the stem and have swollen nodes, and the stems are spotted with a dark maroon color.

All parts of the plant are highly toxic if ingested, especially the seeds and roots, and the plant toxins cause respiratory failure in humans and other mammals. The plant can spread and become an invasive weed.

RANGE. Native to Europe, western Asia, and North Africa, but has been introduced to and has naturalized in almost every state in the United States.

HABITAT. Ditches, roadsides, stream banks, and disturbed areas.

SHOWY RATTLEBOX (*CROTALARIA SPECTABILIS*)

Showy rattlebox is an annual herb in the pea family (Fabaceae). Look for an herb that grows two to four feet tall with simple, alternate, obovate, bright-green leaves that almost sparkle in the sun. It has yellow flowers with the classic banner, wings, and keel structure that mature into a seed pod that rattles when shaken—hence the common name. All parts of the plant are poisonous. The plant has caused severe losses in fowl, cattle, horses, and swine. Showy rattlebox is a nonnative plant from southern Asia.

RANGE. Native to South Asia; considered a nonnative invasive plant in the southeastern United States.

HABITAT. Fields, roadsides, disturbed areas.

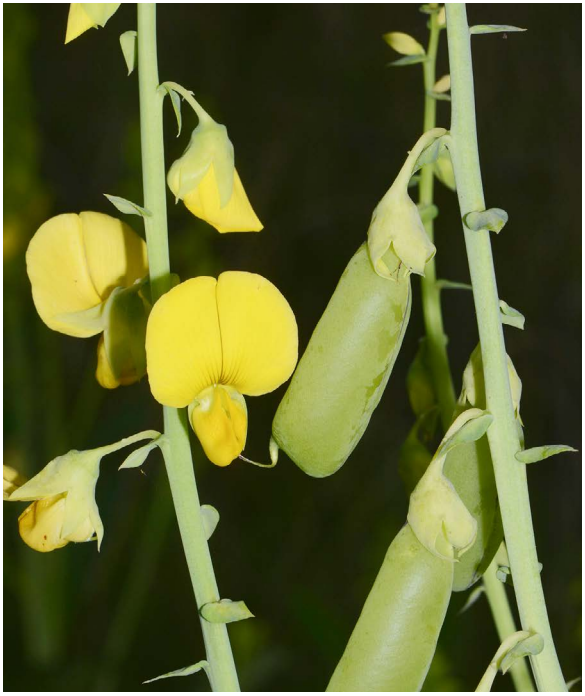
WATER HEMLOCK (*CICUTA MACULATA*)

Water hemlock belongs to the carrot family (Apiaceae), characterized by the large flat-topped inflorescences, known as umbels, that resemble an umbrella. I highly recommend familiarizing yourself with the carrot family. If you are a beginning forager, I suggest avoiding plants that have the umbel-shaped (resembling an umbrella) inflorescence composed of white flowers. An umbel inflorescence looks like an umbrella because the many spokes, flowering stems, attach to a central point.

Water hemlock is an erect herb growing up to nine feet tall. It has pinnately, bipinnately, or tripinnately compound leaves with serrated margins. The stem and especially the leaf base (petiole) have a reddish magenta color. The stems have grooves and lines that run lengthwise. The top portion of the stems are hollow, while the basal branches are diaphragmed.

Be very cautious if you spot a plant growing in a wet environment with compound leaves, white flowers growing in an umbel, and magenta streaks

Flowering poison hemlock (*Conium maculatum*) plant.



Flowering and fruiting showy rattlebox (*Crotalaria spectabilis*).

Flowering water hemlock (*Cicuta maculata*) plant.

along the stem. Study the plant, take a picture, confirm your identification with an expert, and teach your neighbors. All parts of the plant contain the poisonous compound cicutoxin. A small amount of the roots can kill an adult. Also, as the upper portion of the stem is hollow, children who have made peashooters from the hollow stems have been poisoned. This plant is often mistaken for Queen Anne's lace (*Daucus carota*). I frequently see this plant growing in freshwater tidal marshes in South Carolina and in Crystal River, Florida.

RANGE. Native to North America, found in Canada, the United States, and Mexico. It occurs across the United States.

HABITAT. Freshwater tidal marshes, bogs, seepages, ditches, and swamp forests.

USING HERBS FOR HEALTHCARE

Before using a wild herb for the first time, it is recommended to consult with your healthcare practitioner or your naturopath. Many of the wild herbs covered in this field book are good for common ailments, such as

colds, flu, coughs, and so forth. They can be gathered and used during acute conditions. For chronic conditions, or conditions for which you are taking prescription medicine for relief, it is highly recommended to consult with a healthcare practitioner for advice. Some herbs are contraindicated with specific medication. For example, you wouldn't want to take a Carolina willow bark tincture or tea if you are taking a blood thinning medication. Also some prescription drugs become less effective when used with wild herbs. For instance, it is not recommended to take passionflower tincture or tea with any benzodiazepines.

You know your body better than anyone, therefore, you are your best doctor. Be mindful and pay attention to how a wild herb affects your body. When you try a wild herb tea for the first time, drink the tea slowly and mindfully to see how it influences the body. Note whether the tea is bitter, astringent, pungent, sweet, sour, or salty. These different tastes influence the body in unique ways. The bitter taste acts on the liver to help produce more digestive enzymes and bile. Bitter herbs detoxify the liver and the digestive system. The pungent taste helps move stagnant blood, warms the blood, and has a warming effect on the body. To learn more about the different tastes and how they influence the body, I recommend reading *The Yoga of Herbs* by Dr. David Frawley and Dr. Vasant Lad.

If you are pregnant or trying to conceive, I recommend trying mainly nutritive wild herbs such as cleavers, violets, chickweed, mulberry leaves, and nettles. I do not recommend using pungent and really bitter herbs during pregnancy. Always consult with your doctor before consuming a wild herb during pregnancy.

If you plan to relieve your children's acute bacterial and viral infections with wild herbs, I recommend the book *Kids, Herbs, Health* by Linda B. White and Sunny Mavor. This book includes dosage guidelines for homemade products. Thankfully I have been able to use wild herbs when my daughter Annarose gets sick. I call upon the antimicrobial and immune-stimulating herbs, such as eastern horsemint, bay, pine, sea myrtle, and life everlasting. I generally give her a half cup of wild herb tea three times per day and provide wild herb steams to speed her recovery.

For aromatic wild herbs with concentrated oils, such as pine (*Pinus* spp.), be mindful of how much tea you consume if you have a history of kidney issues or a weak urinary system. Oils and resins can irritate the kidneys and

will cause them to work harder. If you have kidney issues, I recommend consulting your doctor before consuming wild herb tea.

Overall, I don't want you to be scared to incorporate wild herbs into your daily life, but I do want you to make educated and wise decisions about which wild herbs you use and when you use them. Always be certain without any doubt that you have the wild herb identification correct before consuming the herb.

Herbal Actions and Properties

HERBAL ACTIONS AND HERBAL PROPERTIES refer to how an herb will influence your body. Familiarize yourself with these terms, as I will refer to them many times throughout this book. Also, at the beginning of the species profiles, I will list herbal actions for each herb. I recommend learning the herbal actions of the wild herbs you connect with and taking notes when working with them. Write down if the wild herb made you urinate (diuretic), did it relax your nervous system (nervine), or did it give your more energy overall (alterative).

ALTERATIVE. Restores normal health, cleanses and purifies the blood, and restores normal body function. Often alterative herbs are bitter, e.g., burdock and dandelion root.

ANALGESIC. Relieves pain when taken orally, e.g., Carolina willow bark.

ANODYNE. Relieves pain when applied externally, e.g., Carolina willow bark.

ANTHELMINTIC. Destroys and dispels parasites, e.g., epazote.

ANTIANXIETY. Helps reduce anxiety, such as passionflower.

ANTIBACTERIAL. Inhibits the growth and production of bacteria, such as Spanish needles and bald cypress fruit.

ANTIDEPRESSANT. Relieves depression, e.g., mimosa flowers and inner bark.

ANTIEMETIC. Lessens nausea and can prevent vomiting, e.g., mint, ginger, catnip, red bay, and swamp bay.

ANTIFUNGAL. Inhibits and eliminates the growth of fungi, e.g., bald cypress.

ANTI-INFLAMMATORY. Counteracts and reduces inflammation in the body, e.g., willow and camphor.

ANTIMICROBIAL. Inhibits the growth of a broad spectrum of microbes: bacteria, fungi, viruses, and protozoans, e.g., wax myrtle.

ANTIOXIDANT. Inhibits oxidation and the production of free radicals in the body, e.g., muscadines.

ANTIPERIODIC. Relieves malarial-type fevers and chills.

ANTIPYRETIC. Lowers or reduces a fever, e.g., willow bark.

ANTIRHEUMATIC. Relieves musculoskeletal inflammation, e.g., camphor tree.

ANTISPASMODIC. Eases cramps or spasms in voluntary and involuntary muscles, e.g., sandalwood.

ANTITUSSIVE. Prevents or reduces coughing, e.g., saltmarsh fleabane, mullein.

ANTIVIRAL. Inhibits the growth and production of viruses, e.g., elderberry, life everlasting, and lizard's tail.

AROMATIC. Contains volatile essential oils that aid digestion and relieve gas, e.g., eastern horsemint.

ASTRINGENT. Tightens and tonifies the mucous membranes and skin, e.g., wax myrtle, southern dewberry.

BITTER. Stimulates digestive enzymes and juices, thereby helping the body absorb the nutrients in the food more fully, e.g., sea myrtle leaves and wild lettuce.

CARDIOTONIC. Tones and has a beneficial effect on the heart and blood vessels, e.g., passionflower, hibiscus roselle and hawthorn berries.

CARMINATIVE. Reduces intestinal gas, pain, and distention, and promotes peristalsis, e.g., eastern horsemint, green cardamon pods, mint, and catnip.

DEMULCENT. Mucilaginous; helps sooth irritated and inflamed mucous membranes, e.g., spiderwort, aloe vera, common blue violet, marshmallow root, and evening primrose.

DETERGENT. Cleanses wounds, ulcers, and skin, e.g., Carolina willow.

DIAPHORETIC. Increases perspiration and allows elimination through the skin, e.g., catnip.

DIURETIC. Increases urine flow and excretion, e.g., wax myrtle.

EMETIC. Induces vomiting, e.g., lobelia.

EMMENAGOGUE. Promotes and regulate menses, e.g., red bay.

EMOLLIENT. Soothes and helps protect the skin, e.g., camphor, comfrey, and chickweed.

EXPECTORANT. Promotes the discharge of phlegm and mucus from the respiratory system, e.g., bald cypress resin and thorny olive.

FEBRIFUGE. Reduces fevers, e.g., Carolina willow.

HEMOSTATIC. Reduces or stops the flow of blood; type of astringent that stops internal bleeding or hemorrhaging, e.g., yarrow.

HYPNOTIC. Nervine herbs that induce and promote deep sleep, e.g., passionflower and valerian.

IMMUNE STIMULANT. Stimulates the immune system during acute infections, e.g., goldenrod, life everlasting, and echinacea.

LAXATIVE. Promotes fecal elimination, e.g., dune pennywort, plantain seeds, and yellow dock root.

NERVINE. Helps strengthen and support the nervous system, e.g., passionflower leaves and flowers.

NUTRITIVE. Nourishes the body with nutrients and/or minerals, e.g., mulberry leaves and plantain.

REFRIGERANT. Cooling; reduces body temperature and thirst, e.g., sumac berries.

RUBEFACIENT. Enhances blood flow through capillary dilation when applied topically; can cause skin redness, e.g., camphor tree.

SEDATIVE. Calms the nervous system and reduces stress and nervousness, e.g., passionflower and lizard's tail.

STIMULANT. Increases internal heat and strengthens metabolism and circulation, e.g., dune pennywort and grand magnolia.

VASODILATOR. Causes the relaxation of blood vessels, e.g., prickly ash.

VERMIFUGE. Expels or repels intestinal worms, e.g., wormwood leaves and Mexican/epazote tea leaves.

Wild Herbs

American Beautyberry

Callicarpa americana

FAMILY: Lamiaceae (mint family)
MEDICINAL PART: Leaves, roots
EDIBLE PART: Fruit
SOLVENT: Water, alcohol
PROPERTIES: Astringent, antiseptic (roots)

IDENTIFICATION

In the fall when American beautyberry, hereafter referred to as beautyberry, starts to fruit, you cannot mistake this wild herb. Look for a shrub chest to head high with opposite, broad leaves and a serrated leaf margin with striking clusters of magenta to purplish round berries arranged in whorls (verticils) around the stem near the leaf axil. Beautyberry's fruit will persist into the winter even after the deciduous leaves fall to the ground. In the spring, although it is harder to spot, look for beautyberry flowering; search for white to pinkish four-petaled flowers arranged in the leaf axils.

RANGE

From Maryland and south to Florida and west to Texas. Also found in Mexico and the West Indies.

HABITAT

Beautyberry grows within the maritime forests, along beach pathways, sand dunes, and hammocks. Also, you can find beautyberry growing in old, abandoned farm fields and early successional habitats along the coast.

HARVEST SEASON

August to October (fruit)

MEDICINAL USE

During his travels through Georgia in the 1700s, the famed naturalist and early explorer William Bartram wrote that the Creek grew fields with "great quantities of callicarpa." Throughout his travel record, Bartram mentions *Callicarpa* up to fifteen times, and six of the comments are associated with the cultivation by the Creeks. This wild shrub was a beloved herb of the Indigenous people of the Atlantic Seaboard—namely the Choctaw, Koasati, Seminole, and Creek—and was used as food and medicine. The roots provided a remedy for urine retention and scalding as well as digestive ailments. A decoction of the branches and roots was used in sweat baths for rheumatism.

Interestingly, many species within the genus *Callicarpa* are used medicinally worldwide. For example, in China, the roots of *C. formosana, C. macrophylla, C. kwangtungensis, C. nudiflora,* and *C. kochiana* are listed in the Chinese Pharmacopoeia as traditional treatments for swelling, rheumatism, stomach ailments, nosebleeds, and menstrual bleeding. Also, *C. acuminata,* a wild herb of the Mexican east coast that is closely related to beautyberry, is an important medicinal plant whose roots locals used for constipation, inability to urinate, and childbirth hemorrhaging.

Beautyberry's leaves contain essential oil with insect-repellent properties due to the chemicals callicarpenal and intermedeol. So the traditional folklore of rubbing a leaf on the skin to repel insects is now backed by science. There are several online videos that demonstrate how to make natural beautyberry insect repellent. You can extract the essential oil and insect-repellent properties of beautyberry leaves in 80- to 190-proof alcohol (vodka, Everclear, or organic cane sugar alcohol) and add other herbs, such as mint, dogfennel, wax myrtle, sea myrtle, and other aromatic herbs and let the herbs extract in the alcohol for two to four weeks. Then strain the herbs and use the extraction as a base for your homemade insect repellent by adding

half of the base extraction to a spray bottle and filling the rest of the way with water. Add five to ten drops of essential oil, such as lavender, citronella, eucalyptus, lemongrass, or mint. My husband, Vasily, always grabs the natural insect repellent before summer yard work, and he always remarks at how well it works to keep the mosquitos at bay.

A favorite late summer and fall activity of mine is the collection of beautyberry fruit and the magical transformation of this fruit into a delicious edible jam. Beautyberry fruit ripens late summer into the fall right before cold and flu season and provides the body with a boost of antioxidants. Once cooked, the fruit turns from a slightly bitter and astringent taste to a sweet, pleasant flavor. They are incredibly easy to forage and prepare as a jam (recipe follows). The vibrant purplish jam is delicious on a nice southern biscuit. If you find a large beautyberry shrub, take the time to forage some beautyberries and make the jam.

GARDENING AND LANDSCAPING

I cannot think of a more attractive native shrub to plant than beautyberry. The purplish fruit transforms any garden space into a magical color show in late summer, fall, and winter. Beautyberry is drought tolerant, easy to establish and transplant, and can tolerate full sun to partial shade. You can easily propagate beautyberry from softwood stem cuttings or by seed. With the help of friends, I rescued two beautyberry shrubs from the Kiawah Island Retirement Center before the land was cleared to build the retirement center. They transplanted well, survived, and have produced viable seeds. After only one year of establishment, volunteer beautyberry shrubs started to appear in our yard. I recommend trying to find a wild shrub to collect seeds from or stem cuttings, or better yet, find a beautyberry shrub to rescue predevelopment.

AMERICAN BEAUTYBERRY JAM

If you live along the Carolina coast, making beautyberry jam at least once is a must. The process is delightfully simple, and the result is a vibrant, flavorful jam that captures the essence of the region. The first time I made it, I wondered why I had waited so long to give it a try. Among all the foraged recipes I prepare at home, beautyberry jam remains one of my absolute favorites. Making this jam is the perfect way to live in season. Both my husband and

daughter, Annarose, go for seconds every time. The jam doesn't last long, so you may want to double the recipe. I recommend pairing beautyberry jam with organic homemade biscuits, or sourdough bread. *Makes 1 cup. Double to make more. You won't regret it.*

- 2 cups beautyberries, rinsed
- ½ cup organic cane sugar
- ⅓ cup lemon juice
- ½ cup water

1. In a quart-size stainless steel pot, add beautyberries and sugar and stir until most of the sugar is dissolved.
2. Next add the lemon juice and water; bring to a boil.
3. Simmer on moderate heat, stirring occasionally until the fruit is soft and the liquid becomes thick, about 20 minutes.
4. Once the liquid transforms to a nice thick consistency, remove the jam from the heat and strain out the seeds.
5. Add jam to pint-size jar.

You can store beautyberry jam in the refrigerator for up to three months; however, it tastes so good, it won't last that long.

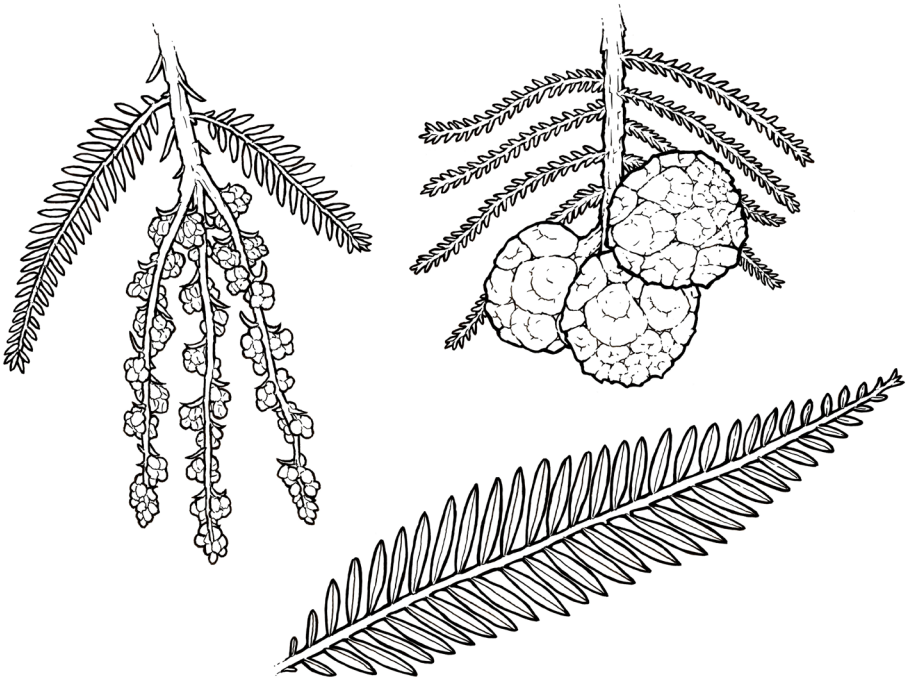
OTHER WAYS TO CONNECT WITH AMERICAN BEAUTYBERRY

- Plant a beautyberry shrub in your garden to add a splash of color in late summer, fall, and winter.
- Harvest the leaves in early spring and summer to make a bug repellent.
- Create stunning flower arrangements with the fruiting branches.

Bald Cypress

Taxodium distichum

FAMILY: Cupressaceae (cedar and cypress family)
MEDICINAL PART: Leaves/needles, bark, fruit (seed cone resin)
SOLVENT: Water, alcohol
PROPERTIES: Antimicrobial (bark and seed cone resin), expectorant, carminative, anti-inflammatory, diuretic (seed cone resin)



IDENTIFICATION

Bald cypress is the only evergreen tree that loses all its needles every winter, hence the common name, bald cypress. Look for a tall tree (70 to 150 feet) with a swollen trunk, grayish, reddish-brown peeling bark, and deep fissures. A key identifying feature of bald cypress are the "knees," once thought to be pneumatophores that help the tree with gas exchange. Now the "knees" are thought to help anchor the tree in swampy habitats. Bald cypress is a

long-lived tree with some trees dating more than a thousand years old along the Black River in North Carolina. The older trees develop bonsai-looking flat-topped crowns. Bald cypress is a majestic wetland tree with feather-like compound leaves that arise in one plane along flexible branches. Look for round, green cone fruit in the summer that turns brown in the fall. The fruit has diamond to triangular peltate scales that once mature open to expose the seeds.

RANGE

The natural range of bald cypress extends along the coastal plain from Delaware to south Florida and west into southeastern Texas.

HABITAT

Bald cypress thrives in the warm, humid climate of the South, where it grows in blackwater swamps, rivers, wet depressions, spring seeps, and stream banks. Natural bald cypress stands grow on flat topography at elevations less than a hundred feet above sea level. Your chances of spotting a bald cypress growing along the Carolina coast in brown and blackwater wetland habitat are really high. Surprisingly, given that it's a wetland species, planted bald cypress can tolerate and survive in well-drained soil. Bald cypress is becoming a popular landscape tree in parking lots, given that it is maintenance-free.

HARVEST SEASON

October to December (fruit)

MEDICINAL USE

Bald cypress contains a highly antimicrobial resin within the wood and fruit that protects the tree from microbes. The aromatic amber resin protects the fruit during water dispersal along the blackwater rivers and depressions. Indigenous people discovered that the resin could help protect and heal wounds. Also the resin was used to treat ulcers, skin diseases, toothache, and gout. All parts of the tree have been used in traditional medicine: the bark, branches, leaves, and cones. Recorded uses include medicinal infusions and ointments prepared from all parts of the tree to remedy wounds, hemorrhoids, ulcers, rheumatism, diarrhea, and bronchial diseases.

The rot-resistant wood made it possible for the Indigenous people to make canoes, houses, dance posts, coffin logs, medicine bowls, mortars, and pestles. In the 1700s and 1800s, bald cypress was used to make rice field trunks; many persist today, demonstrating the wood's durability.

I will never forget the first time I smelled bald cypress resin. I was at Magnolia Plantation in Charleston, South Carolina, and I noticed this globular green fruit hanging from the flexuous branches. Curiously, I collected one fruit and started to scratch its outer surface with my fingernail. I took a big whiff and was immediately delighted by the fruit's fragrance. It reminded me of Old Spice cologne. After my initial smell, I knew I had to crack open the fruit. So I split it open with my hands and uncovered this beautiful, amber-colored resin. Due to the resin's aroma, there was no doubt in my mind that the resin was useful. So, I went home and started to do research, and, lo and behold, I found many recorded uses for the resin that I now share with you.

My favorite way to extract the resin is by making an alcohol tincture with 190-proof alcohol. Alcohol extracts the resin well, and after two weeks of extraction, I use the antimicrobial tincture anytime I feel like I am getting sick with a cold or virus. I also use the tincture on chigger bites and other irritated insect bites by applying the bald cypress tincture to the outer perimeter of the bite. It does sting slightly because of the alcohol, but it stops the itch. Once the tincture is gone, a large amount of amber resin usually remains at the bottom of the jar. I use that resin to make salves for wounds and cracked heels. I have used the salve for stubborn skin infections with excellent results.

Modern research on the healing resin has shown that it contains taxodione, an anticancer phytochemical. Further, the resinous phytochemicals have been shown to help with gastrointestinal disorders such as diarrhea, colic, hemorrhoids, inflammation, respiratory disorders, including bronchitis and asthma. One hundred and thirty compounds have been isolated from bald cypress and the fossil species *T. balticum* and *T. dubium*. In addition, twenty-three major compounds have been identified in its essential oils, such as a-pinene, limonene, and camphene. The resin inside the cones contains the highest concentration of resins and essential oils. I use the resin predominately for wound healing and to help prevent and relieve bacterial and viral infections.

GARDENING AND LANDSCAPING

Bald cypress makes an excellent accent tree in the southern landscape. The attractive feathery two-ranked leaves in the fall turn a beautiful rusty yellowish-orange color. Also the reddish-brown peeling bark provides a textural feature year-round. Once the globular female fruit cones mature and fall to the ground, they don't cause a massive mess like sweet gum balls, but they do strike kids' botanical curiosity. Plus you can pick up the fruit and smell the aromatic resin and make medicine. Plant in an area with full sun and relatively moist to saturated soil. Bald cypress can survive in well-drained soil but will thrive if the soil is moist. As this tree can live for centuries and has a maximum diameter of three to six feet, be sure to plant in an area with ample space.

HOW TO CONNECT WITH BALD CYPRESS

- Plant a bald cypress accent tree.
- Nibble a few leaves when out in the field. Make an immune-stimulating tea from the leaves using one tablespoon of fresh leaves to one cup of hot water, steep for 5 to 10 minutes.
- Collect the fruit, pound with a large rock to open, and use the resin directly on healing wounds or bug bites.
- If you are a trained herbalist, make an antimicrobial tincture from the bald cypress fruit using 190-proof alcohol.

Blanket-flower

Gaillardia pulchella

OTHER COMMON NAMES: Firewheel
FAMILY: Asteraceae (aster family)
MEDICINAL PART: Aerial portion
SOLVENT: Water, alcohol, oil
PROPERTIES: Anti-inflammatory, diuretic, antistress, antiseptic

IDENTIFICATION

When in bloom, you cannot miss blanket-flower, also known as firewheel. The red daisy-like flowers with yellow-tipped ray petals and orange to red disk flowers stand out against sandy beach paths. Also the alternately arranged bluish-green leaves occur on weak stems that lay out horizontally along beach baths, catching the eyes of many passersby. The pubescent

leaves are three times long as wide, the cauline leaves along the stem have an entire leaf margin, hug the stem, and have a short petiole. Oftentimes blanket-flower germinates in the late winter, so you want to look for seedlings by looking for a basal rosette of spatulate leaves that are four to five times as long as wide and serrated along the leaf apex. Blanket-flower has a long blooming period, from April until the first frost. It is considered a short-lived perennial in warmer climates but becomes an annual in colder regions, completing its life cycle in one year.

RANGE

Blanket-flower grows from southeast Virginia south to Florida and west into Texas on the outer coastal plain and maritime strand. It also grows into the middle and southwest states. Blanket-flower, primarily a southwestern species.

HABITAT

You can find blanket-flower growing along beach pathways, dunes, sandy roadsides, and other sunny, dry habitats. Blanket-flower grows along *every* dune system I have visited along the Carolina coast. Go to the beach during the summer and you will find blanket-flower in full bloom.

HARVEST SEASON

April to September

MEDICINAL USE

Although blanket-flower is not widely used as an herb, it has medicinal leaves, flowers, and roots. Blanket-flower contains sesquiterpenes known to be anti-inflammatory and to have antistress and antitumor properties. Although bitter, no part of the plant is poisonous or harmful to humans. You can make an herbal infusion from the leaves, flowers, and roots. A tea and tincture of the flowers reportedly relieve stress.

The genus *Gaillarida* contains anti-inflammatory and antimicrobial sesquiterpenoids. Both blanket-flower and common blanket-flower (*Gaillarida aristata*) have been used by Indigenous people in North America for wound healing. Flowers were added to soups and stews and were used as garnishes.

The Blackfoot made a foot wash by infusing blanket-flower heads. Kiowas saw the blanket-flower as a symbol of good luck. A decoction of the roots was used for gastroenteritis, and powered roots were used for skin disorders. A tea from the aerial portion was made to relieve sore nipples from nursing and as an eyewash.

I have used the blanket-flower as a poultice on inflamed mosquito bites that have become infected. Also, as the flowers have antioxidants, I make an antioxidant-rich tea from them (recipe follows).

GARDENING AND LANDSCAPING

There isn't an easier or more attractive wild herb to grow in a sunny coastal garden than Blanket-flower. Blanket-flower easily establishes from seed; you will have it forever once established. It is drought and salt tolerant. All it needs is full sun and well-drained soil. I recommend collecting flower seedheads in the fall and placing them directly in your garden. Since I was a young girl growing up near the Chesapeake Bay, I've admired blanket-flowers along beach paths. I've always dreamed about having large swaths of blanket-flower in my garden. So after I purchased my first coastal home, blanket-flower seeds were the first addition to the bare soil. I'd go to the beach, collect seedheads, come home, and toss them into the new garden. The following year, lo and behold, there were three germinants. Honestly I accidentally weeded two out. After which I looked closely at the leaf shape, texture, and color and realized my mistake. So, thankfully, the third one was rescued from the garden claw. From one blanket-flower seedling, numerous clumps have spread to the four corners of our yard. I am a happy camper as nothing makes me smile like blanket-flower. I suggest growing blanket-flower in your yard so you can be a happy camper too. I almost forgot to mention that this wild herb will bring a swarm of beneficial insects and pollinators to your yard, including butterflies (such as the common buckeye and fritillary butterflies), bees, moths, and songbirds.

BLANKET-FLOWER ANTIOXIDANT-RICH TEA

When working with a wild herb for the first time, experimenting and practicing with the flower is an excellent place to start because flowers generally contain less medicine than the roots. As the blanket-flowers have antioxidants, why not make tea? So I went to my garden on a fall day and foraged

eight blanket-flowers. I made a light infusion, added a tablespoon of honey and voila, this recipe was born. I hope you give it a try. *Makes 1 serving.*

- 1½ cups water
- 8 blanket-flowers, rinsed
- 1 tablespoon raw honey (optional)

1. Add water to a teapot or kettle, bring to a boil, and pour water over the flowers.
2. Cover and steep for 10 minutes. After it has finished steeping, you should notice a nice red color.
3. Remove/strain the flowers.
4. Add honey to taste.

OTHER WAYS TO CONNECT WITH BLANKET-FLOWER

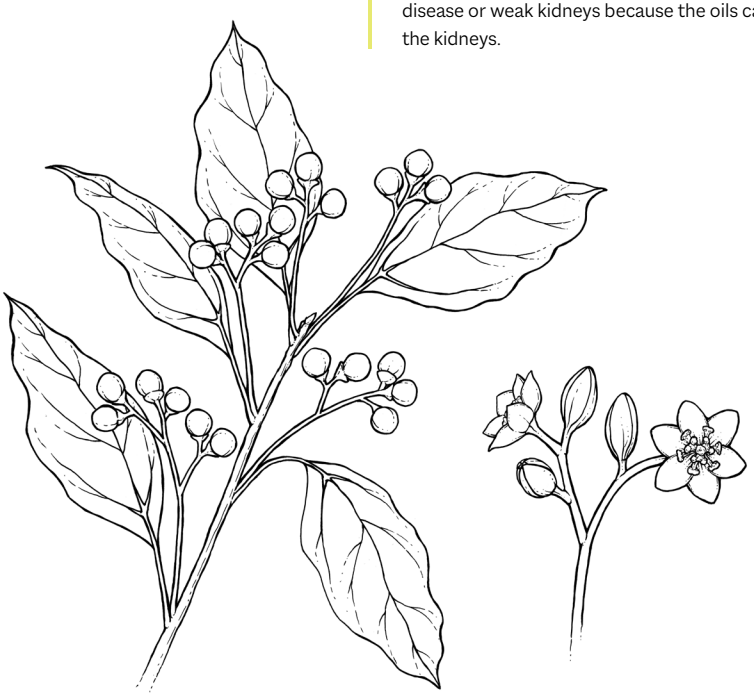
- Make an antimicrobial poultice from the leaves for healing wounds.
- Make an anti-inflammatory and antimicrobial infused herbal oil from the aerial portions and use to make salves.
- Make a tea from the roots to relieve gastrointestinal inflammation.
- Ecoprint with the flowers.

Camphor Tree

Camphora officinarum

FAMILY: Lauraceae (bay family)
MEDICINAL PART: Leaves, fruit, inner bark
SOLVENT: Water, alcohol, oil
PROPERTIES: Antimicrobial, anti-inflammatory, antispasmodic, analgesic, stimulant, rubefacient, astringent, sedative, emollient, antiviral

Warning: I don't recommend working with camphor during pregnancy. Also I don't recommend adding camphor leaves to tea blends for people with kidney disease or weak kidneys because the oils can irritate the kidneys.



IDENTIFICATION

Look for a tree, approximately twenty to sixty-five feet tall, with a symmetrical crown and a trunk that has a light gray-brownish bark with deep grooves. The younger stems have a greenish-brown bark. Although not the showiest tree, the camphor tree has distinctive aromatic leaves that smell like Vicks VapoRub and you can easily confirm your identification by crushing a few

leaves. Camphor tree has leaves that stand out because they are shiny on the upper surface and a whitish grey (glaucous) on the undersurface. Check to ensure the leaves have an entire leaf margin, no teeth/serration, and the leaf margin looks wavy/undulating. The leaf has a long pointing apex known in botany as attenuate.

I first spotted a sapling camphor tree growing along a fence line in Charleston County. The shiny leaves popped out from the other vegetation. So, I picked a few leaves, crushed them, and instantly knew it was a medicinal plant by the pleasant aroma. The small white- to cream-colored flowers composed of six tepals mature into navy blue to black fruit, known as drupes, fall through early spring. (Tepals occur on flowers that don't have true petals or sepals, so botanists call them tepals.) The fruit type is a drupe with a hard, stony seed in the middle.

RANGE

Camphor tree's native range includes Japan, Korea, Nansei-shoto, and Taiwan. It is a nonnative invasive plant in North America, growing from North Carolina south to Florida, and west into Texas.

HABITAT

As this nonnative invasive plant was planted ornamentally, the camphor tree doesn't have a particular habitat other than urban and suburban parks, hedgerows, and fence lines. Birds spread and disperse camphor seeds, so camphor saplings are common along hedgerows and fence lines along the Carolina coast.

HARVEST SEASON

Year-round

MEDICINAL USE

Camphor tree contains antimicrobial, anti-inflammatory, and pain-relieving essential oils such as camphor, linalool, safrole, and cineole, which make it a useful wild herb for upper respiratory infections, neuropathy, and inflammation. If you have ever used Vicks VapoRub when sick, you have called upon camphor for relief. The main ingredient in Vicks VapoRub is camphor although the product now contains synthetic camphor.

Because camphor is a nonnative invasive along the Carolina coast, you can forage as much of the tree as you need and dry and store it throughout the winter. I collect camphor leaves, dry them in brown paper bags, and use them during the winter for steam facials. The steam combined with camphor's antimicrobial cooling oils helps relieve sinus pressure and assists the body in fighting respiratory infections. When applied externally, camphor relieves pain by producing the feeling of coolness due to the stimulation of nerve endings sensitive to cold. You can easily make a camphor liniment to relieve joint and muscle pain (recipe follows).

GARDENING AND LANDSCAPING

I don't recommend planting a camphor tree in your yard as it is *highly invasive.* Also, you can easily find one growing along the Carolina coast, especially in the Lowcountry of South Carolina.

CAMPHOR HERBAL LINIMENT

One summer, my brother-in-law Savvas was visiting and he was experiencing knee pain. I used this camphor liniment on his knee, and he experienced immediate relief. For several months after he visited, every time we'd talk on the phone, he'd ask, "April what was that stuff you used on my knee again . . . man! that stuff really worked." The great thing about this recipe is (1) it works—it relieves joint pain and inflammation, (2) it is super inexpensive, and (3) you can make it in ten minutes. The only thing about this recipe is that *you must ensure no one ingests it internally* as isopropyl alcohol is toxic. You can use 80-proof alcohol, such as vodka, if you don't want to use isopropyl alcohol or you can use witch hazel extract. Also, you could mix 75 percent witch hazel extract and 15 percent isopropyl alcohol if you don't like the strong smell of alcohol.

When you make this recipe, be sure to label your jar in bold capital letters "**FOR EXTERNAL USE ONLY.**" *Makes 1 cup.*

1 (½ pint) glass mason jar
1 cup finely chopped camphor leaves (1 inch), use scissors
1 cup isopropyl alcohol
Plastic lid or wax paper
Label

1. Add chopped camphor leaves to a mason jar until there is one inch of headspace remaining.
2. Pour alcohol over the chopped leaves
3. Transfer alcohol and leaves into a blender and blend for 60 seconds. This helps increase the surface area of the herbs to the alcohol and results in more oils and medicine being extracted from the leaves.
4. Transfer the blended liniment back into your glass mason jar.
5. Label, write date, ingredients, and add **FOR EXTERNAL USE ONLY! Keep out of reach of children**.
6. Infuse for two weeks. Shake daily.
7. After two weeks, strain with cheesecloth or an old T-shirt.
8. Pour your camphor liniment into a glass dropper bottle or back into the mason jar. Label your dropper bottle. Apply with a cotton ball.

OTHER WAYS TO CONNECT WITH CAMPHOR TREE

- Collect camphor leaves to use in steam facials to relieve sinus and upper respiratory infections. Approximately ½ cup of chopped leaves (use scissors) to 4 cups of water in a quart pot. Bring the water to a boil, carefully remove the pot from the stove, and hover a safe distance from the pot with a towel over your head for 10 minutes. Breathe deeply.
- Infuse dry camphor leaves into olive or sweet almond oil to make an anti-inflammatory massage oil.
- Use the dried leaves in incense blends or smudge sticks.
- Make an infusion or decoction from the leaves and apply to sprains or inflamed joints.
- Make an infusion or decoction from the leaves to add to your bath.

Carolina Willow

Salix caroliniana

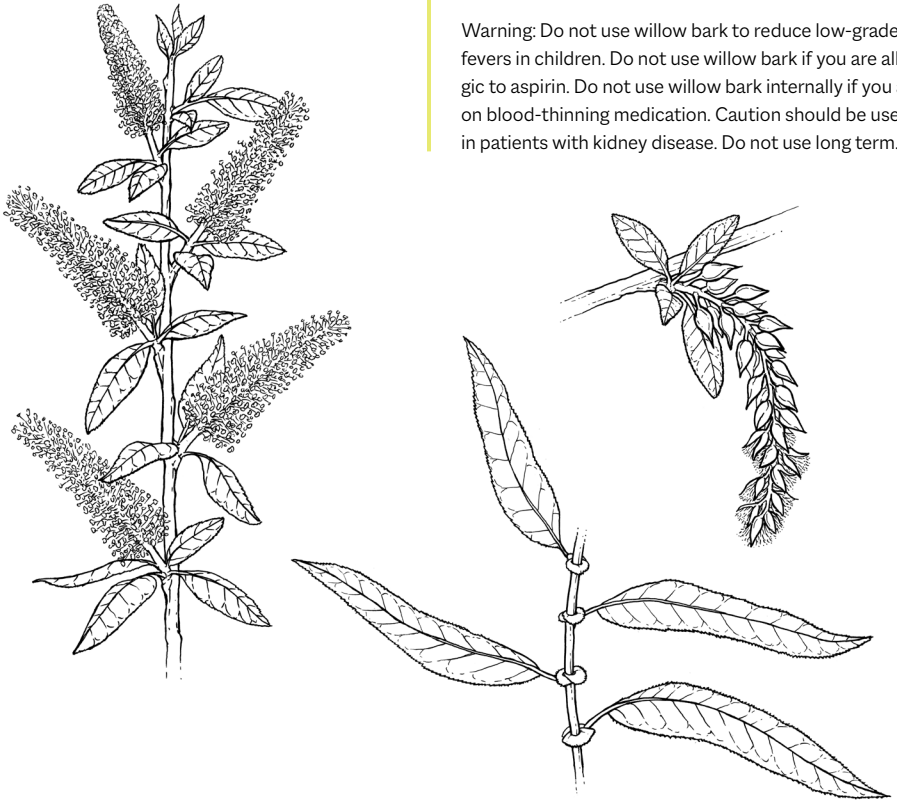
FAMILY: Salicaceae (willow family)

MEDICINAL PART: Inner bark, leaves, roots

SOLVENT: Water, alcohol

PROPERTIES: Anti-inflammatory, tonic, astringent, detergent, antiperiodic, febrifuge, antirheumatic (external and internal), analgesic, antidiarrheal, anticancer

Warning: Do not use willow bark to reduce low-grade fevers in children. Do not use willow bark if you are allergic to aspirin. Do not use willow bark internally if you are on blood-thinning medication. Caution should be used in patients with kidney disease. Do not use long term.



IDENTIFICATION

Look for a medium-size tree, up to thirty feet in height, with a shrubby appearance due to multiple thin, flexuous branches. Carolina willow has beautiful yellowish-brown bark that has deep fissures/grooves. I think about how Carolina willow loves water, and the bark looks like it has tributaries running longitudinally down the bark. Another way I spot a willow is by

spotting the long, alternately arranged leaves that are four to six times as long as wide. To confirm your identification, turn the leaf over and check for a grayish-white underside (glaucous) and a finely serrated leaf margin. The diagnostic feature that sets it apart from black willow (*Salix nigra*) is the glaucous (grayish-white color) leaf undersurface. The young twigs have an attractive light green-yellow color. The female and male flowers (catkins) occur on separate plants (dioicous) and usually appear in the early spring before leafing. As with all willows, the branches are pliable and often are leaning. Approximately four hundred *Salix* species occur worldwide in temperate and boreal regions.

RANGE

Widespread in the southeast from Virginia south to Florida, and west to Texas. Carolina willow occurs in Illinois, Missouri, Arkansas, and Kansas. Native to Mexico and parts of Central America and the Caribbean.

HABITAT

Look for Carolina willow in low, wet habitats, such as interdune ponds, riverbanks, sandbars, edges of brackish marshes, ditches, canal banks, and other wet sites. Wherever there is freshwater and even brackish water along the Carolina coast, Carolina willow grows.

HARVEST SEASON

Early spring and fall (inner bark)

MEDICINAL USE

An entire book could be written about the medicinal use of willow because the inner bark of the willow tree has been used as medicine worldwide since antiquity. The inner bark of young branches has been used to treat fever, pain, swelling, and inflammation. The inner bark of all willows contains a unique phytochemical called salicin. Our stomach and liver synthesize salicin and convert it into salicylic acid. Salicylic acid reduces the production of prostaglandins (hormone-like substances that generate inflammatory response), thereby reducing inflammatory pain in the body. In the 1800s, salicin was used to develop aspirin. However, now aspirin is biosynthesized in a lab and no longer contains the natural salicin from the willow tree. Aspirin, similar to

other nonsteroidal anti-inflammatory drugs (NSAIDs), can harm the gastrointestinal tract making extended use a nonreliable option. Willow bark does not harm the gastrointestinal tract like NSAIDs. The combination of the salicin, flavonoids, and other phytochemicals in the willow bark make it easier for the body to assimilate. In America, willow bark extract is not an approved prescription for inflammation, but in Germany willow is an accepted prescription for osteoarthritis and rheumatoid arthritis.

Given the medicinal properties of willow, I was grateful that a wild willow, Carolina willow, grew in abundance along the Carolina coast. Although I didn't know any herbalists working with Carolina willow at the time, I decided to make an alcohol tincture using 190-proof organic cane sugar alcohol. After four weeks, I strained the young woody stems from the alcohol, and what remained was a powerful anti-inflammatory medicine. A Carolina willow bark tincture does not last long in our house as I am always gifting it to family and friends in need. We use it for back and neck pain, both topically and internally, and for inflamed joints and ligaments.

Although few people use Carolina willow today, it was traditionally used along the coastal plain by Houmas, Seminoles, and Creeks. The Creek used Carolina willow, known to them as akwahnv, as a ceremonial medicine, blood medicine, oral medicine, love medicine, hunting medicine, a strengthener, a stimulant, respiratory aid, preventative medicine, dermatological aid, eye medicine, and as an orthopedic aid. They used the inner bark for fever, stiff neck, and backache. A decoction of the bark was used as an emetic during the green busk ceremony to "cleanse out the insides."

I call upon Carolina willow when I have a sprained joint or tendon. I make a leaf and stem decoction to apply externally to speed the recovery of aches and pains, such as a sprained ankle, backache, headache, etc. I add leaves and stems to healing wound decoctions for staph infections including boils. You can make an infusion or decoction from the leaves and stems to use as an antidandruff hair rinse or use the decoction as a facial toner.

Since many willow species have long drooping branches, harvesting the medicine (the young branches) is easy.

GARDENING AND LANDSCAPING

Few landscape trees capture our eyes like a willow tree. Although the Carolina willow isn't as attractive as a weeping willow, it is native and, therefore,

has many pollinator and wildlife connections. It is the only native larval plant for the viceroy butterfly (*Limenitis archippus*). In the fall, I noticed the viceroy landing on our Carolina willow in the front yard. I thought it was a monarch. The monarch and viceroy look identical. You need a trained eye to tell the difference. Adding a Carolina willow tree to your landscape will attract the viceroy and many other butterflies, including the tiger swallowtail (*Papilio glaucus*), to your yard. Other known butterflies to lay eggs on Carolina willow include the mourning cloak (*Nymphalis antiopa*), red-spotted purple (*Limenitis Archippus*), and eastern comma (*Polygonia comma*).

As a fast-growing and bushy tree, Carolina willow can provide a deciduous living screen. I planted two Carolina willow stakes in my front yard fifteen feet from the ditch. After two years, I started to have more privacy in my yard, thanks to Carolina willow.

Carolina Willow can tolerate partial shade but prefers full sun. As a wetland tree, Carolina willow needs moist soil to thrive. Plant a Carolina willow tree near a pond, rain garden, or ditch as an accent tree. Do not plant Carolina willow near septic systems or foundations, the roots naturally spread toward water and may cause structural damage. Willow can easily be propagated by young stem cuttings. Place the stem in water for several days or use a rooting hormone powder to propagate a native Carolina willow.

CAROLINA WILLOW ANTI-INFLAMMATORY FOOT SOAK

If someone in our family gets hurt—sprained joint or tendon—the first tree I call upon is the Carolina willow. I make this anti-inflammatory decoction to speed recovery. This recipe is simple, fast, and easy to make. *Makes 1 foot soak.*

- 8 4- to 6-foot-long willow branches with leaves, twigs should be smaller than your thumb
- ½ gallon water
- 3 tablespoons Epsom salt (optional)

1. Chop the leaves and twigs into 1-inch pieces.
2. Add the water to a stock pot and add the chopped willow leaves and stems.
3. Bring water and herbs to a boil.
4. Once boiling, add the Epsom salt, turn off the heat, and let the willow decoct for 30 to 40 minutes. After at least 30 minutes, add the

decoction to a large enough basin to soak the injured body part or add to a bath. Soak for 30 minutes. If the injured body part cannot be soaked, add the decoction to a large bowl and thoroughly soak a washcloth in the willow decoction and place the washcloth gently on the injury. Let the washcloth remain on the injury until the liquid cools. Repeat several times.

You can also use the decoction on a cold day in the winter and soak your feet for self-care. Grab your favorite book, a cup of warm herbal tea, and soak your feet for 20 minutes or until the liquid gets cool. Be sure to check the temperature of the water before immersing your feet. You want it to be hot, but not scalding.

OTHER WAYS TO CONNECT WITH CAROLINA WILLOW

- Make a hair rinse with the leaves and stems by following the same process above.
- Make an acne-fighting decoction from the leaves and young branches, use the same recipe above, but reduce by half, or more than half. Test a small area of your skin before applying completely.
- Make a tincture using 190-proof alcohol from the young stems.

Common Germander

Teucrium canadense

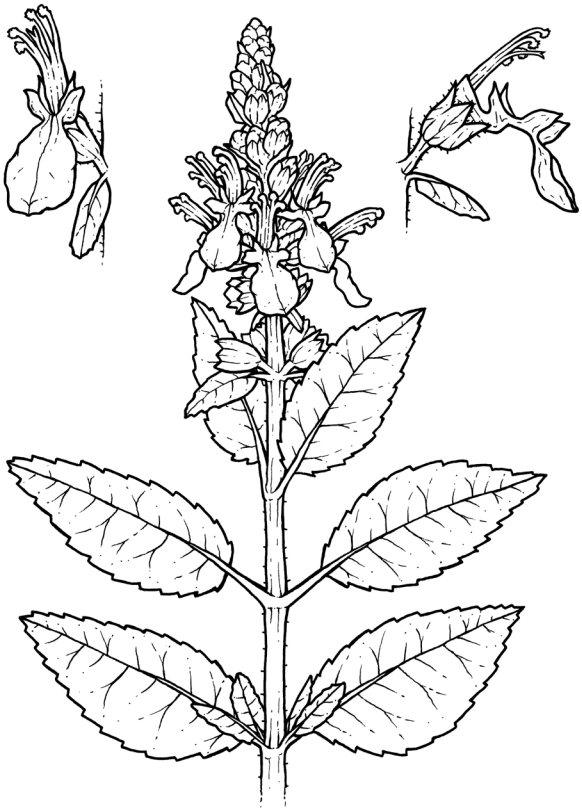
FAMILY: Lamiaceae (mint family)

MEDICINAL PART: Leaves, flowers, stems (aerial portions used mainly for external use)

SOLVENT: Water, alcohol

PROPERTIES: Antiseptic, antimicrobial

Warning: Studies conducted on the genus *Teucrium* have reported that the tea can cause liver toxicity when ingested internally.



IDENTIFICATION

Given that common germander belongs to the mint family, Lamiaceae, it has a square stem, opposite leaves, and an irregular flower that makes identification easy. Plus it is an attractive perennial herbaceous herb that will easily catch your eye with its grayish pubescent leaves and lavender flowers. The

tiny lavender flowers have a distinctive bottom one-lipped corolla that is a landing pad for bees. Common germander reproduces primarily asexually by underground stoloniferous rhizomes. It flowers from June to October.

RANGE

Mostly a coastal species ranging from Novia Scotia south to Florida and west to Texas and Oklahoma.

HABITAT

Like most mints, common germander prefers to grow in moist, well-drained soil. It grows adjacent to and along the margins of the interdune swale area where there is ample moisture between dunes. I have never seen it growing along the dune system and I suspect because the dune habitat is too dry. So keep your eyes open for this wild herb when you are in a moist coastal habitat, such as bottomlands and interdune swales.

HARVEST SEASON

May to October (flowers and leaves)

MEDICINAL USE

Common germander has potent aromatic oils that are released upon squeezing the leafy tissue. These aromatic oils are antimicrobial. Where the genus *Teucrium* grows, humans use it for wound care. Common germander and many other *Teucrium* species, including *T. chamaedryas, T. polium,* and *T. marum,* are used as an antiseptic wash. Species within the *Teucrium* germander genus effectively combat bacterial biofilms formed by *Staphylococcus aureus*. A leaf and flower rinse can be used to cleanse wounds (recipe follows).

The early settlers used common germander as an antiseptic dressing from the aerial portion of the plant. An infusion of the aerial portion, the part of the plant above ground, of common germander was used historically by the early settlers to induce menstruation, urination, and sweating. The tea made from the aerial portions of common germander is very bitter. A few studies on the *Teucrium* genus discourage this plant's internal use because it could cause liver toxicity. Studies conducted on the *Teucrium* genus show mixed results, with some saying a tea made from aerial portions doesn't cause liver damage and others reporting it does. Because common germander

is an effective antiseptic and there are other plants we can safely work with for internal issues, I use this wild herb primarily externally.

GARDENING AND LANDSCAPING

Common germander is a must-have in any coastal garden. It is an herbaceous perennial that looks as attractive as any ornamental perennial you could purchase, except this one is native and useful. You can easily propagate common germander from a stem cutting. Simply take a four-to-six-inch cutting of the new fleshy green growth. Cut the stem at an angle, place it in rich soil or your garden space when you get home, and water it every day for seven days. I cut back several of the plants in my garden and stuck the cuttings in the garden space to see if they would grow, and to my surprise they took root. You can always use rooting growth powder and dip the end of the stem if you want to increase the chances the stem takes root.

Common germander prefers full sun but can tolerate partial shade. Like other mints, it prefers moist, well-drained soil. Add to the edge of woodland gardens where it can get full or partial sun. This wild herb would make an excellent addition to coastal rain gardens and any native wild herb garden.

GERMANDER ANTISEPTIC WOUND RINSE

Red, inflamed superficial wounds are always alarming, especially if a staph infection. My daughter developed a staph infection on her toe that spread rapidly after a mosquito bite. I decided to soak her foot in this antiseptic wound rinse with Epsom salt thrice daily for thirty minutes. Also, I put on a bald cypress salve following the rinse, gave her probiotics, and restricted her sugar intake. Her staph infection cleared in seven days without the use of oral antibiotics. I practiced mindful watching during treatment and consulted with a nurse practitioner who supported my protocol. Always use your best judgement and consult your physician regarding wounds

and staph infections. I cannot give you medical advice, but I want you to have tools if and when needed.

When foraging the aerial portions of common germander, be mindful of the local population. If there aren't many stems, decrease this recipe by half. *Full recipe makes 3 treatments.*

1 cup common germander leaves (and flowers if available), rinsed
2 cups water
4 tablespoons Epsom salt (optional)

1. Chop or tear the leaves and flowers into 1-inch pieces.
2. Pour water into a quart pot and bring to a boil.
3. Once boiling, turn off the heat and add the chopped common germander. Cover pot with a lid and let the oils and phytochemicals infuse into the water for 30 minutes.
4. After 30 minutes, add the decoction to a large enough container to soak the injured body part. Add the Epsom salt, if using, and soak the infected skin for 30 minutes. If the injured body part cannot be soaked, you can soak a washcloth or an old T-shirt in the decoction and then gently place on the wound. Repeat three times per day—once in the morning, once in the afternoon, and once in the evening. Store the decoction in the refrigerator or discard at room temperature after 24 hours.

OTHER WAYS TO CONNECT WITH COMMON GERMANDER

- Make an antimicrobial aromatic infused oil with the aerial portion to add to your salves.
- Use the aerial portions in potpourris.

Dune Camphorweed

Heterotheca subaxillaris

FAMILY: Asteraceae (aster family)
MEDICINAL PART: Leaves, flowers
SOLVENT: Water, alcohol, oil
PROPERTIES: Anti-inflammatory, antimicrobial

IDENTIFICATION

Look for an herbaceous biannual herb with clasping, rough leaves and small, yellow daisy-like flowers growing along dunes. Dune camphorweed has leggy stems that hang down, decumbent, often extending along beach paths. From August to October, you will find dune camphorweed in full bloom if you look down while walking along the beach path to the ocean. To confirm your identification, rub your fingers along the dark green, sessile, lanceolate leaves; the leaves have a rough, coarse texture due to trichome hairs. Also the leaves have a wavy to sparsely serrated leaf margin. The yellow aster flowers have

ray petals and disc flowers. Depending on where it is growing, it is either an annual, biennial, or short-lived perennial.

RANGE

A coastal species growing from New Jersey south to Florida, west to Texas and Mexico.

HABITAT

Dune camphorweed is a dominant species within the Carolina dune system, hence the common name dune camphorweed. You can easily find it along most beach trails leading to the ocean in the Carolinas. It grows along dunes, dune swales, open and sandy disturbed areas, and roadsides.

HARVEST SEASON

July to November (flowers)

MEDICINAL USE

Although I was attracted to dune camphorweed at first sight, it took me several years before I connected deeply with this wild herb. During foraging classes, students would ask, "What is that plant?" I'd answer, "It's dune camphorweed (*Heterotheca subaxillaris*), but I haven't worked with it yet." For several years that was my response. You can only connect with so many wild herbs at once, and I firmly believe it's not how many wild herbs you know but how well you know each one. So it took me a while to practice and connect with dune camphorweed.

Being in the aster family, dune camphorweed contains monoterpenes and sesquiterpenes, secondary plant metabolites that protect the plant from herbivores, such as Lepidopteran insect larvae. These secondary plant metabolites also protect humans as they are anti-inflammatory, antimicrobial, and anticancer phytochemicals. Also, dune camphorweed contains flavonoid glycosides. Flavonoids have many medicinal benefits, including anticancer, antioxidant, anti-inflammatory, and antiviral. Dune camphorweed additionally contains the essential oil compound borneol, which suppresses *Bacillus subtilis* and *E. coli* bacteria. So perhaps it's not surprising that dune camphorweed is collected and used as a medicinal plant in Mexico. The flowers are mashed into a poultice and used externally to relieve heat rash, burns,

and itchy skin. Also, it is used internally to remedy stomach problems and coughs. Another *Heterotheca* species, *H. inuloides,* is used similarly to the anti-inflammatory and pain-relieving arnica flowers (*Arnica montana*) and is even called Mexican arnica. The flowers are sold at markets in Mexico as a remedy for internal and external inflammation. Although there are no reported uses of Indigenous people in America using dune camphorweed prior to European settlement, dune camphorweed was likely used as a medicinal plant, given its widespread use by Indigenous people in Mexico.

Because dune camphorweed is a prevalent wild herb along the Carolina coast and has a wide variety of immune-stimulating, inflammation-suppressing, and anticancer phytochemicals, I would love to see it become a popular garden herb. I have made an anti-inflammatory poultice from the flowers and can attest to the effectiveness. This wild herb reduces swelling and redness of the skin tissue.

GARDENING AND LANDSCAPING

Thanks to a former student, Nora Luce, I rescued several dune camphorweed plants from a predevelopment senior center on Kiawah Island. With my shovel in hand, I scooped up several dune camphorweed babies while my daughter played. To my surprise and delight, the rescued dune camphorweed grew large and spread all over the yard. Now, I am confident that our yard will *always* have dune camphorweed. I spotted many first-year dune camphorweed babies by looking for the rough, textured, wavy leaves. I used pin flags to mark first-year plants so my sweet husband knows to mow around them. Now we have what I call dune camphorweed islands. These are areas, islands, within the monoculture "weedy" lawn where dune camphorweed successfully outcompetes the grass. Other native wild herbs such as blanket-flower, eastern horsemint, seaside goldenrod, and evening primrose often pop up as well where we stop mowing.

Because dune camphorweed quickly spreads in the right conditions, it is not the plant for you if you want a perfectly maintained yard and don't like to "weed." However dune camphorweed is the wild herb for you if you view whimsical cottage gardens as dreamy and love sharing wild herbs with your friends. Given a suitable habitat, full sun with well-drained sandy soil, dune camphorweed will spread in every corner of your yard. As our house is south facing and has well-drained sandy soil, dune camphorweed lines many of our

footpaths, occurs in almost every wild herb garden bed, and is always popping up in unexpected places.

Dune camphorweed gets leggy, but I love the graceful yellow sprays once it starts to flower. I love that it flowers as soon as the days shorten in September and continues to bloom through most of the winter before it freezes. Tiny native bees and many other pollinators feed on the pollen and nectar of dune camphorweed. It is a vital food source as the season changes, and I am certain that it plays a critical role in the life cycle of many coastal beneficial insects.

If you live along the coast, invite dune camphorweed to your garden by collecting seeds or mature flower heads from the beach. Lay the seed heads in sunny areas in your yard during the fall. Mark the area with pin flags, keep your fingers crossed, and I bet you'll have dune camphorweed babies in the spring. Dune camphorweed typically germinates in the winter when the ground is moist, so keep your eyes open for it during the late winter months of February and early March. It transplants well given a nice watering for several days afterwards.

DUNE CAMPHORWEED INFUSED OIL

Flower-infused oils are an herbalist's delight. Flowers have been infused in oil to soothe the body and heal dry, inflamed skin. Given the high antioxidant content of dune camphorweed flowers, they make the perfect wildflower to gather for making an infused oil. You can use this oil as a facial serum and apply before showers instead of using facial soap (for normal to dry skin). Also you can use this infused oil in your salves and facial creams and can apply it directly to your skin to relieve dryness. I use it as a breast oil as well. The oil should stay shelf-stable for six months to a year. To dry the flowers, lay them on a flat surface so they are not touching or overlapping. Depending on the humidity of your home, it will take 14 to

20 days for the flowers to completely dry. *Makes 1 cup. Double the recipe to make more.*

½ cup of dry dune camphorweed flowers
1 (½ pint) glass mason jar
1 cup carrier oil (olive, sweet almond, or grapeseed oil)

1. Add ½ cup of dry flowers to the mason jar and pour your carrier oil over the flowers.
2. Transfer the flowers and oil to your blender and blend on high speed for 60 seconds. You can leave the carrier oil and flowers in the blender for the day, and every time you walk into the kitchen, blend the oil on high speed for another 60 seconds. Repeat this 4 to 6 times to get a more potent oil. (Use a glass blender if possible.)
3. Transfer the oil blend back to your mason jar, secure a lid, and let it infuse for two weeks.
4. After two weeks, strain the dune camphorweed flowers from the oil using organic muslin, old T-shirt, or cheesecloth.
5. Pour the oil back into the mason jar or into oil tincture bottles and label.

OTHER WAYS TO CONNECT WITH DUNE CAMPHORWEED

- Make a tea from the flowers. One tablespoon of fresh flowers to one cup of hot water. Steep for ten minutes.
- Mash the flowers with a little bit of water or oil to make a poultice to relieve insect bites or burns.

Dune Greenbrier

Smilax auriculata

FAMILY: Smilacaceae (smilax family)
MEDICINAL PART: Leaves, stems, roots
EDIBLE PART: Young shoots
SOLVENT: Water
PROPERTIES: Anti-inflammatory, tonic, diuretic, sudorific, antidiabetic, anticancer, antiobesity

IDENTIFICATION

Look for a perennial vine growing in a clumping formation along dunes. Dune greenbrier has thick green stems growing in a zigzag fashion and are mostly spineless. The leathery ovate leaves are smaller than other greenbrier species such as *Smilax bona-nox* and *Smilax laurifolia*. Umbels of white flowers appear May through July and mature into navy blue to purple fruits October through November.

RANGE

Dune greenbrier grows from eastern North Carolina south to south Florida and west to Louisiana and occurs on the islands of The Bahamas.

HABITAT

You can easily find dune greenbrier covering dune systems on barrier islands, hence the common name dune greenbrier. It grows in open full sun areas with sandy soils.

HARVEST SEASON

April to May (young shoots), year-round (roots)

MEDICINAL USE

The genus *Smilax* has a long history of traditional use across the globe. Wherever *Smilax* grows, from Europe to Cuba, it has been used for food, medicine, and often both. Every part of the plant is useful, from the leaves to the roots. Because most *Smilax* species have medicinal roots that contain a variety of phytochemicals, including steroid saponins, flavonoids, polysaccharides, and polyphenols, many herbalists only identify the plant to genus and not to species. Many herbal books have species monographs on *Smilax*, but it is often only identified by the genus, *Smilax* spp. and not by the species. However from my experience working with *Smilax*, there seems to be a dichotomy in the root types, with some *Smilax* species having more starchy, thick rhizomes, and then other *Smilax* vines having rhizomes that are long and slender. The long, slender root *Smilax* species (*Smilax regelii*, *S. ornata*, *S. glabra*, *S. officinalis*) seem to be used more for medicine whereas some of the thickly starchy *Smilax* herbs such as dune greenbrier (*S. auriculata*) are used more for food. Some of the species with traditional uses in the southeast include *Smilax bona-nox*, *Smilax glauca*, *Smilax pseudochina*, and *Smilax laurifolia*.

Smilax root tea is considered a tonic drink that helps cleanse the blood and relieve inflammation. The root tea can relieve rheumatism and improve overall well-being and energy levels. *Smilax* roots, known as sarsaparilla, have a long history of use in Jamaica, where it is used to improve joint health, cleanse the liver, and to enhance stamina and libido. As hormones are metabolized in the liver and smilax root tea helps cleanse the liver, the root tea

likely supports healthy, balanced hormone levels in the body. *Smilax* root tea is also used to relieve hot flashes in menopausal women. The root tea can balance hormone levels in both men and women by detoxifying and improving liver health.

The thick starchy roots of dune greenbrier have a long use history by Indigenous coastal groups pre-European settlement. Recorded uses by the Seminole include making a compound infusion of the leaves and buds for chronic conditions and in birthing ceremonies. Also the starchy roots were pounded and mixed with water and the starch drained out to make bread. The Seminoles call the rhizomes of several *Smilax* species *kunti chate*, which is sometimes translated as "red flour." I grated dune greenbrier root and the grated material turned red, so I imagine the bread made from dune greenbrier starch would be red. I find it fascinating that cultures worldwide, from one end of the globe to the other, have connected and worked with the medicine of *Smilax*. Now we need to bring back the popularity of this herb to the West, where it can go from being a pesky weed to an essential medicinal plant. Will you help me?

GARDENING AND LANDSCAPING

When growing any *Smilax* species in the yard or garden, surrendering is key. Greenbrier is often the most contested species in the yard. Many people have asked me, "What's this vine, I can't get rid of it?" If you live along the coast, you likely have a *Smilax* vine in your yard, I recommend allowing it to grow where it pops up. Greenbrier generally prefers full sun, but can tolerate partial shade and a variety of soil conditions. Dune greenbrier typically only grows along the dunes and likes full sun and dry feet. You may consider growing it on a trellis. Harvest the roots in the fall every few years to reduce its spread.

HOW TO CONNECT WITH DUNE GREENBRIER

- Sauté the young vine sprouts in the early spring when they resemble asparagus.
- Make a tea from the leaves.
- Make a bread from the roots by pounding, mixing with water, and straining the starchy powder to dry and then use in baking.

Dune Pennywort

Hydrocotyle bonariensis

OTHER COMMON NAMES: Dollarweed
FAMILY: Araliaceae (ginseng family)
MEDICINAL PART: Leaves, roots
EDIBLE PART: Leaves, roots
SOLVENT: Water, alcohol
PROPERTIES: Anti-inflammatory, diuretic, laxative, antidiabetic, antiseptic, stimulant, anticancer

IDENTIFICATION

Look for an attractive herbaceous plant with circular, umbrella-like (peltate), bright green leaves that arise directly from the earth. The leaf veins radiate from the center and extend outwards towards the serrated leaf margin. As dune pennywort, hereafter called pennywort, roots at every node along the rhizome, it can quickly form a groundcover. Tiny five-petaled white flowers, arranged in compound umbels (flower stalks arising from a single point), appear in April through September.

RANGE

Pennywort grows from southeast Virginia south to Florida and west into Texas. It is widespread in South and Central America and occurs in several western African countries where it is considered a nonnative plant.

HABITAT

Look for pennywort along beaches, dunes, and moist sandy areas. Pennywort occurs in various coastal habitats, including urban and suburban yards. If you live along the Carolina coast, there is a high likelihood that pennywort grows in your yard.

HARVEST SEASON

Year-round

MEDICINAL USE

Pennywort is a valuable wild herb that, sadly, most people along the Carolina coast weed out of their gardens. Pennywort contains antioxidants, flavonoids, polyphenols, and saponins that rejuvenate and restore the body. The genus *Hydrocotyle* occurs worldwide and is traditionally used as a medicinal plant in West Africa, Latin America, South America, and Malaysia.

The common name for pennywort in West Africa and Nigeria is karo. Pennywort is traditionally used to relieve inflammation, rheumatism, and arthritis, and to improve brain capacity and for longevity. Fresh leaves are boiled in approximately 5.2 quarts of water for fifteen minutes and cooled, and the liquid is drunk three times a day. *Hydrocotyle ranunculoides* is sold as "tianguis" in markets as leafy vegetables. It is used externally in South America and West Africa to heal inflamed wounds and skin inflammations. A leaf poultice or leaf juice has been used to relieve eczema, erythema (reddening of the skin), psoriasis, and acne. Also, it has been used to "erase" freckles. In Malaysia it is known as Pegaga Embun, and it is closely related to *Centella asiatica* (Apiaceae), referred to as Pegaga Kampung.

In the 1800s syrup and juice were made from pennywort leaves to improve digestion and to help heal ulcers. Other traditional uses for this herb include treating high blood pressure, tuberculosis, kidney and liver issues, diabetes, tonsilitis, hepatitis, and cataracts. Overall, pennywort contains a lot of antioxidants that stabilize free radicals, repair cell damage, improve brain

health, and make your body more resilient. Further, pennywort includes a diversity of phytochemicals that relieve inflammation, rheumatism, and arthritis. Like the closely related gotu kola (*Centella asiatica*), pennywort can improve brain function and memory. Fresh material likely has more antioxidants than dry.

Given its many antioxidants, I eat fresh pennywort leaves from my yard. I typically forage three to four leaves, rinse them in cold water, and eat them in the morning. Also, I make a beautiful detoxing, chlorophyll-rich green drink from eight to ten fresh leaves (recipe follows).

GARDENING AND LANDSCAPING

Pennywort quickly grows in various conditions but prefers moist, well-drained soil and partly shady conditions. In my yard, it thrives in lower-lying areas where water pools during rainstorms. It grows close to the gutter spouts, illustrating that it likes its feet wet occasionally. Also, in shady areas in my yard, the pennywort leaves are larger and darker green compared to the full sun areas where the leaves tend to be a dull light green. If you live along the Carolina coast and plant dune pennywort anywhere in your yard, it will flourish. However, there is a high likelihood that pennywort already grows in your yard.

To enjoy pennywort in your garden, you must view it as an attractive creeping groundcover. Pennywort spreads quickly from asexual reproduction, rooting at each node along the underground stem, often sending a new runner in a different direction. Trying to completely weed pennywort out of your garden space once it is established is futile. So, it is best to view it for what it is—an attractive medicinal wild herb that can greatly benefit your health. When you do weed it out of your garden bed, make the recipe below.

DUNE PENNYWORT DETOX JUICE

For the longest time, students would ask me, "Isn't dune pennywort a useful plant, and can't you make pesto from the leaves?" I'd say, "Yes, I believe so, I've heard of people doing that." However I hadn't eaten the plant yet. Finally, the time had come for me to connect deeply with pennywort. I started to eat the leaves from my yard. I dried leaves for tea. I made tea from fresh leaves. From my experience, I knew that I liked the fresh leaves best. So, I decided to

make green juice from the leaves. Much to my delight, the leaves easily blend in water and produce the most vibrant green juice/water rich in chlorophyll.

This recipe was created for all the health-conscious, busy humans working five days a week with a full plate. Because this recipe is a fast and easy way to flush antioxidants and chlorophyll into your body, anyone with a blender and a yard full of pennywort can make this juice in five minutes. You want to forage leaves that are bright green without any discoloration or marks on the leaves. I hope you give it a try. Here's to good health! *Makes 2 servings.*

2 cups water or coconut water
8 to 10 pennywort leaves, rinsed
A few fresh mint leaves (optional)
1 tablespoon raw honey, honey, or agave syrup to taste (optional)

1. Add water to a blender, add the pennywort leaves, and pulse on high speed for 60 seconds.
2. Strain the pennywort juice into a nice wine glass or any decorative glass you prefer.
3. Add honey or agave syrup to taste, if using.

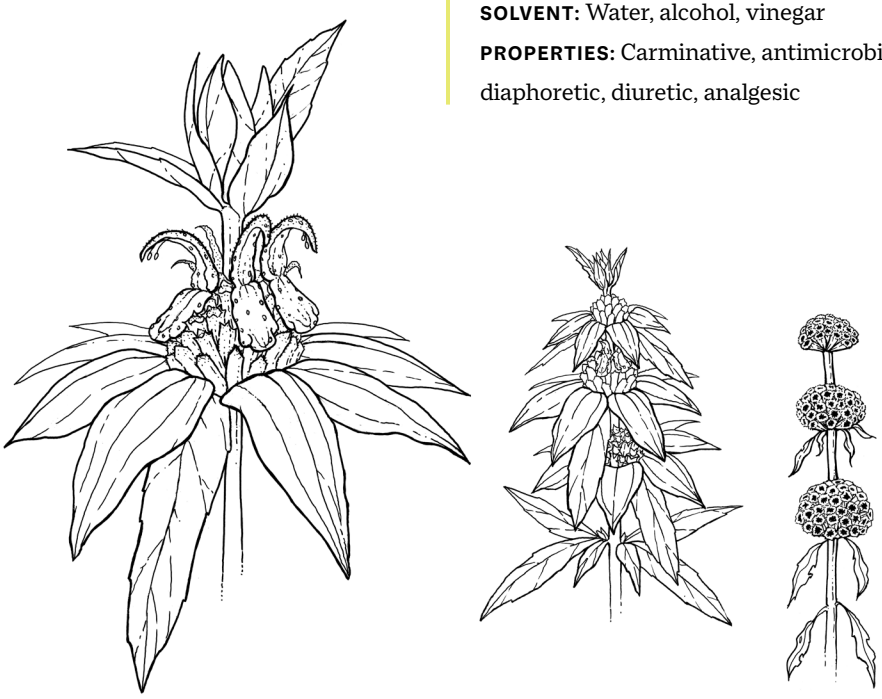
OTHER WAYS TO CONNECT WITH DUNE PENNYWORT

- Make a pesto from the leaves.
- Add raw leaves to your salad.
- Make a tea from the fresh leaves.
- Nibble a few leaves as you garden.

Eastern Horsemint

Monarda punctata var. *punctata*

FAMILY: Lamiaceae (mint family)
MEDICINAL PART: Leaves, flowers, aerial portion
EDIBLE PART: Leaves and flowers
SOLVENT: Water, alcohol, vinegar
PROPERTIES: Carminative, antimicrobial, diaphoretic, diuretic, analgesic



IDENTIFICATION

You cannot miss eastern horsemint when it is in full bloom from July through October. The pinkish purple bracts (modified leaf to attract pollinators) subtend tiny yellow flowers speckled with maroon dots that will easily catch your eye. Scan coastal dunes, old roadsides, and vacant lots for eastern horsemint in the Carolinas. Once you spot an eastern horsemint population, confirm your identification by looking for grayish-green opposite leaves three to five times as long as wide. The leaves arise opposite of each other along a square stem. The small, tubular-shaped flowers have two fused upper petals and three fused lower petals. If that sounds like a foreign language to you, don't worry—look for an herbaceous plant knee to waist height with pink bracts and yellow flowers. If in doubt, crush a few leaves to confirm your

identification: eastern horsemint is highly aromatic and smells like oregano. You can't mistake it.

RANGE

New Jersey south to Florida, west to Texas. Mainly a coastal plain species.

HABITAT

Eastern horsemint thrives in open areas, such as dune grasslands, windy beach paths, roadsides, and in sandy fields. If you live near the beach, look for it in your yard. I found eastern horsemint growing in my backyard amongst tall grass and other wild plants. Eastern horsemint has a long harvest season; you can harvest the aerial portions (leaves, stems, and flowers) from May through October.

HARVEST SEASON

April to July (leaves), August to October (aerial portion—flowering tops and leaves)

MEDICINAL USE

This mighty herb contains thymol, an essential oil with a sweet, peppery taste, known in popular culinary herbs such as oregano and thyme. Whenever a student tastes eastern horsemint, they say it tastes like oregano. Indeed it tastes so similar to oregano that I call it our native oregano. I add eastern horsemint to spaghetti sauce, pizza, minestrone, any tomato dish—as well as omelets, quiches, black beans, popcorn, and potatoes. I substitute eastern horsemint for oregano in any recipe that calls for the herb.

Beyond its culinary excellence, eastern horsemint is a powerful medicinal herb thanks to thymol, which inhibits harmful bacteria, viruses, and fungi. Unsurprisingly this herb, similar to thyme, serves as a remedy for respiratory ailments, including a cold, flu, sore throat, and sinus infections, and gastrointestinal disorders, such as flatulence, nausea, constipation, and stomach cramps. Because eastern horsemint, the *Monarda* genus, is most closely related to thyme and oregano. It makes sense that the three species are used similarly.

Historically, Indigenous people along the Eastern Seaboard knew the strength of eastern horsemint. They (Cherokees, Delawares, and Nanticokes)

used it to relieve headaches, promote restful sleep, aid digestion, strengthen weak bowels, break a fever, and relieve inflammation.

I always add a sprig or two to immune-stimulating decoctions when someone in our house, family, or community gets sick. Also, I always have a large jar of dried eastern horsemint in our pantry. I used to keep it in the apothecary, but I grabbed it too often, so now the jar stays in the kitchen.

GARDENING AND LANDSCAPING

Eastern horsemint prefers full sun but can tolerate partial shade. It is super easy to grow, as it requires no watering or fertilizer after establishment. Plant in a sunny location and watch it spread. Once established, eastern horsemint can outcompete grass. I have seen it pop up in the middle of lawns. If you want to naturalize your yard, this is the wild herb for you. In the fall, try to find a native seed source or a native population to collect seeds from, and never collect all the seeds or flowers from a wild population. In the fall after collecting the seed, place the seed or seedheads directly in your garden where you want it to grow. I don't recommend bringing the seeds inside during winter and sowing them in the spring. You will have more success, germination, and establishment by sowing seeds in the fall, following the natural rhythms of nature.

EASTERN HORSEMINT HERBAL VINEGAR

Herbal vinegars are easy to make and preserve the essence of wild herbs throughout the year. This eastern horsemint herbal vinegar is my favorite to make because the aromatic oils cut through the apple cider vinegar. I like to use this wild herb vinegar on quinoa salads, in salad dressings, and in marinades. If you live along the coast, I recommend growing eastern horsemint so you always have some on hand to make this vinegar once a year. I make it every summer and store it in an attractive salad dressing bottle I purchased from Home Goods.

Forage the aerial portions of eastern horsemint. Rinse if desired.

The vinegar will kill any pathogens that may be on the plant material beforehand. If you rinse the herb before making the vinegar, you must wait for it to thoroughly dry. Any extra water in the vinegar may cause spoiling due to a decrease in the acidity. *Makes 1 pint.*

- 1½ cups eastern horsemint, chopped
- 1 (pint) glass mason jar with plastic lid
- 2 cups apple cider vinegar with the mother
- 1 garlic clove, crushed

1. Place the chopped eastern horsemint and crushed garlic into the mason jar, making sure to leave one inch of headspace at the top.
2. Pour up to two cups (it may only take 1½ cups) of apple cider vinegar over the chopped eastern horsemint. Ensure all of the plant material remains underneath the vinegar.
3. Once you have the herb and vinegar in the jar, put either a plastic lid on top or use a piece of wax paper between the medal lid and the vinegar.
4. Label the jar with the date and ingredients used.
5. Let the vinegar extract the aromatic oils and other minerals for 2 to 4 weeks. Store the vinegar in an area in your kitchen that doesn't get direct sunlight.
6. After several weeks, strain the plant material out using cheesecloth, muslin, or an old T-shirt.
7. Pour your herbal vinegar back into the glass pint jar or a glass jar for oils or vinegars.

OTHER WAYS TO CONNECT WITH EASTERN HORSEMINT

- Harvest the aerial portions of the plant, dry, and store to use throughout the winter as a culinary herb and cold remedy. I have a half-gallon jar of dried eastern horsemint to get through the winter.
- Create an herbal butter with the dried leaves and flowers.
- Make an herbal salt with the aerial portions.
- Add the fresh or dried herb to soups, black beans, stews, and any tomato-based dish.
- Sprinkle dried leaves and flowers over popcorn.

Eastern Red Cedar

Juniperus virginiana var. *virginiana*

OTHER COMMON NAMES: Southern red cedar

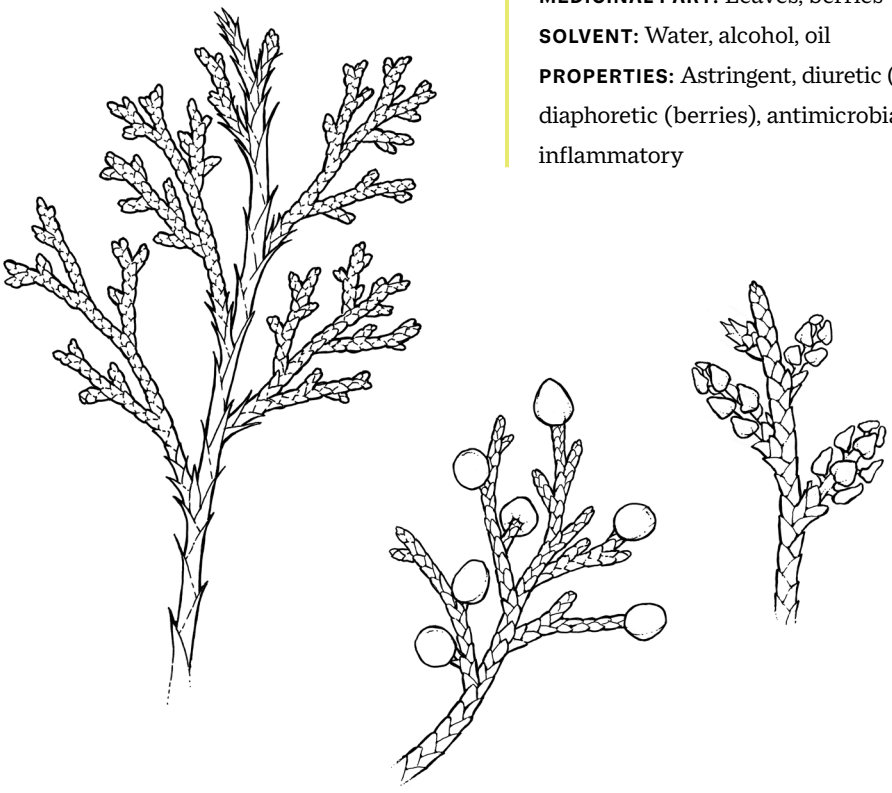
VARIETIES: ***Juniperus virginiana*** var. ***silicicola:*** female cones, scale leaves obtuse to acute. ***Juniperus virginiana*** var. ***virginiana:*** female cones, scale leaves acute.

FAMILY: Cupressaceae (cedar and cypress family)

MEDICINAL PART: Leaves, berries

SOLVENT: Water, alcohol, oil

PROPERTIES: Astringent, diuretic (berries), diaphoretic (berries), antimicrobial, anti-inflammatory



IDENTIFICATION

Look for a conical evergreen tree with peeling, reddish-brown bark. The small, scaly, awl-shaped leaves hug the stem in an opposite decussate (where two leaves cross to form an X) pattern. The leaves hug the stem so tightly that you can't discern the leaf pattern without a 10× hand lens. However, you

can confirm your identification by squeezing the dark green, tightly overlapping leaves to see if they release a pine woodsy aroma. If the leaves have an aroma and the tree has reddish-brown peeling bark, then bingo, you have eastern red cedar. If you are working with a young tree, squeeze the leaves lightly because they are spiny tipped to discourage herbivores such as deer and maybe even humans.

The male (pollen) and female (seed) cones occur on separate plants (dioicous). When ripe, the berry-like seed cones are a dark bluish to purple. The male cones start to shed pollen in late winter to early spring.

RANGE

Southeastern Canada south to Florida and west to the Great Plains.

HABITAT

Look for eastern red cedar in maritime forests, maritime scrub forests, dunes, old fields, roadsides, and fencerows where it has escaped the mower.

HARVEST SEASON

Year-round (leaves), November to December (fruit)

MEDICINAL USE

Eastern red cedar is the only juniper in the Carolinas called a cedar. Junipers, genus *Juniperus,* are used for medicine and as an incense. Twenty different *Juniperus* species are used as incense and as a fumigant for sick rooms worldwide. When you ignite dried eastern red cedar, you release the antimicrobial oils. Many junipers' dried leaves and berries have been used as an incense or smudge to relieve asthma, head colds, and bronchitis. Also, the inhalation of red cedar has a soothing effect, relaxing the parasympathetic and sympathetic nervous system.

The berries have a long history of use. In the 1800s, cedar/juniper berries were collected from the farming districts of South Carolina and fermented. Porcher (1869) noted that: "The juice of the juniper contributes so much to health that I cannot too strongly recommend its being mixed, in greater or less quantities, with all fruits which are subjected to fermentation. Rinds of oranges, lemons, aromatic plants, angelica roots, peach leaves, may be mixed with fruits that are naturally too sweet and serve to raise the flavor of the

fermented liquor and rendering it more strengthening and efficacious in preventing the attack of disease" (p. 189).

Historically berries were used as a diuretic, a popular remedy for dropsy, edema, and water retention. One prescription was as follows: "Take one handful of the seed of the cedar, the same of mullein, the same of the roots of dogwood; put into two quarts and a pint of water, boil down to one quart, and add one gill of whisky" (Porcher, 1869, p. 589). The dose was described as being a wineglassful night and morning.

I work with the leaves and berries. I use the leafy branches in steam facials to relieve sinus infections (recipe follows). Also I use the dry leafy branches as incense for cleansing and purifying our home. By enjoying the smell of eastern red cedar, I inhale the beneficial cedrol oil that relaxes my nervous system and helps me stay grounded. I collect the berries in the fall and leave them on a plate in my office throughout the year. When I am craving a snack, I often eat a few (two to three) juniper berries instead. Eastern red cedar berries and all juniper berries contain thujone, a secondary plant metabolite that can irritate the kidneys and nervous system if eaten in high quantities. However, two to five berries per day will have more of a beneficial tonifying effect on the body than an irritant effect. Eastern red cedar is one of those wild herbs you could write an entire book about. Consider yourself lucky if you have one growing in your yard.

GARDENING AND LANDSCAPING

Eastern red cedar makes a great accent tree due to its conical shape, evergreen foliage, and low maintenance requirement. Once established, eastern red cedar will grow for many years as a drought-, salt-, cold-, and wind-tolerant species. It is a medium- to long-lived species; the oldest tree recorded was approximately five hundred years old. It provides shelter and food for many wildlife species, such as cedar waxwing, which got its name from the tree. Keep your eyes open for seedlings in your yard near your fence, foundation, or underneath other woody species.

EASTERN RED CEDAR STEAM FACIAL

The antimicrobial properties of eastern red cedar and the pleasant cedar/juniper aroma make this the perfect wild herb for steam facials when you have a cold or a sinus infection. I had a bad sinus infection that was relieved

by this steam facial. I did the steam facial two times per day, once in the morning and evening, and it cleared in a few days. Since that day, I have told all my students, members, and now you about the healing power of eastern red cedar. *Makes 1 treatment.*

3 cups water
1 cup eastern red cedar leaves and stems

1. Add water to a quart-size stainless steel pot. Add loosely packed leaves and young stems.
2. Bring to a boil. Once it starts boiling, turn off the heat.
3. Place the pot on a trivet, hover over the steam, approximately one foot from the pot, and cover your head with a towel. Keep your eyes closed during the steam facial. Remain there for at least 10 minutes.
4. Once finished, splash cool water on your face to close your pores.

OTHER WAYS TO CONNECT WITH EASTERN RED CEDAR

- Harvest the ripe purplish berries in the fall and nibble on them throughout the year.
- Add the dried fruit to spice blends.
- Forage the leafy branches, dry, and burn as a cleansing and grounding incense.

Florida Betony

Stachys floridana

FAMILY: Lamiaceae (mint family)
MEDICINAL PART: Leaves, flowers, roots
EDIBLE PART: Roots
SOLVENT: Water, alcohol
PROPERTIES: Anti-inflammatory, sedative, antimicrobial

IDENTIFICATION

Look for an herbaceous perennial herb with a hairy square stem, opposite leaves, and pinkish-purple flowers. Most often, you will find Florida betony in its vegetative state (not flowering), so look for a plant with light green leaves,

a serrated leaf margin, and leaves that are longer than wide. The irregular flowers have three fused lower petals and two fused upper petals. Florida betony flowers from April to May. To confirm your identification, dig up the plant to see if it has white tuberous rhizomes that resemble the shape of the colon or, some say, the tail of a rattlesnake.

RANGE

Primarily a coastal plain species growing from North Carolina south to Florida and west into Texas. Florida betony is a known native plant of Florida and is considered naturalized in other states.

HABITAT

Florida betony grows in disturbed habitats such as roadsides, lawns, gardens, and vacant lots. It spreads easily in the loose soils of cultivated ground where the root system can extend rapidly. It is considered an aggressive "weed" that is hard to eradicate once established.

HARVEST SEASON

March to June (roots)

MEDICINAL USE

The old saying "one man's trash is another man's treasure" rings true for plants, especially for the Florida betony. Many people view this species as a problematic weed to eradicate due to the rhizomes that allow it to spread vegetatively. However in China, Florida betony known as yinmiao, is a traditional food that provides a highly digestible carbohydrate. This species has a high tetrasaccharide stachyose content, making it a good carbohydrate for people with diabetes. Stachyose can increase gut microbiota, which helps reduce inflammation in type 2 diabetic patients, similar to the drug Metformin. Chemical analyses of the roots have shown they contain polysaccharides with antitumor and liver-protecting properties, making this plant a useful natural supplement. Our microbiome breaks down polysaccharides through anaerobic fermentation. The end product is short-chain fatty acids that reduce inflammation in our colon and may reduce our risk of colon cancer. I don't know about you, but when one of these buttery nutty rhizomes pops out of the Earth, I eat it.

GARDENING AND LANDSCAPING

If you live along the Carolina coast, particularly the South Carolina coast, you already have Florida betony in your yard. Florida Betony grows in almost every square inch of our yard. If you don't get the roots (the highly nutritious edible part of the plant), pulling "weeding" Florida betony will be futile. It will come back year after year from those hardy edible rhizomes. Florida betony prefers partly sunny conditions with moist soil. However it can grow in a wide variety of conditions.

FLORIDA BETONY SALAD

The buttery, nutty flavor of Florida betony roots makes them the perfect addition to a spring salad. They have a crunchy texture and give the salad a nice pop of white. For the coastal gardener, foraging Florida betony roots will be a breeze as tubers quickly surface when spring beds are prepared. When I prepare new beds in the spring, I have a bowl of water and toss the tubers in for a presoak. You will need a shovel or hand trowel to harvest the roots as they are a few inches below the soil surface. The most time-consuming part of making this salad is cleaning the tubers. I recommend cleaning underneath your outside spicket and using a potato peeler to remove the outer layer or blanch the roots. *Makes 2 to 4 servings.*

- 3 tablespoons olive oil
- 1 garlic clove, mashed or ⅓ cup chopped onion
- 2 cups finely chopped Swiss chard, kale, or wild mustard greens
- 1 cup chopped purple cabbage
- 2 teaspoons rice or herbal vinegar
- ½ teaspoon soy sauce or liquid amino acids
- ½ cup wild edible flowers (such as wild mustard or violet flowers)
- 4 to 6 Florida betony roots, washed and chopped

1. Add two tablespoons of olive oil and the mashed garlic clove (or chopped onion) to a stainless steel skillet over medium heat.
2. Add the greens and purple cabbage. Pour the remaining 1 tablespoon of olive oil on top of the greens. Stir. Sauté on medium heat for 3 to 5 minutes.
3. As soon as the leafy greens start to wilt remove the skillet from the heat.
4. Add 2 teaspoons of rice vinegar and ½ teaspoon of soy sauce (or liquid amino acids).
5. Transfer your greens to a nice ceramic or glass bowl and sprinkle the edible flowers and Florida betony roots on top.
6. Serve and enjoy.

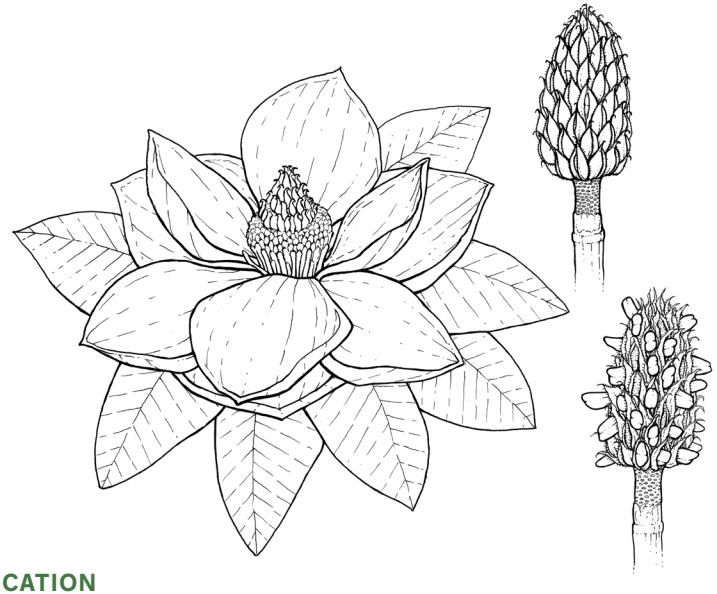
OTHER WAYS TO CONNECT WITH FLORIDA BETONY

- Make a tea from the leaves and flowers.
- Add the roots to stir-fries.
- Add the roots to any fermentation you do, such as Curtido.

Grand Magnolia

Magnolia grandiflora

FAMILY: Magnoliaceae
MEDICINAL PART: Leaves, flowers, seed cones, fruit, inner bark, root bark
SOLVENT: Water, alcohol
PROPERTIES: Tonic, stimulant, astringent, anticancer, anti-inflammatory, antiperiodic, diaphoretic



IDENTIFICATION

Look for a large evergreen tree (up to fifty feet tall) with tightly arranged branches that form a conical shape. The aromatic, dark-green leaves (five to eight inches long) are covered with rusty-colored hairs on the underside. You can easily spot the grand magnolia when the fragrant, showy, white- to cream-colored flowers appear from late April to June. In September, the flowers mature into fruit, known as an aggregate of follicles. Look for the red fruit dangling from delicate strands in the fall. The seeds have a fleshy red coat called an aril that attract migratory birds.

RANGE

The coastal plain from southeastern North Carolina to central Florida, west to eastern Texas.

HABITAT

Grand magnolia grows in maritime forests, coastal swamps, hammocks, stream banks, and in neighborhoods where they are planted as a shade or ornamental tree.

HARVEST SEASON

May to June (flowers), year-round (inner bark)

MEDICINAL USE

As grand magnolia blossoms are my mom's favorite flower and they bloom during Mother's Day, I have fond memories of collecting the white flowers in the neighborhoods of Norfolk, Virginia, where grand magnolias are commonly planted as ornamentals. All that time, I never knew that grand magnolia was a medicinal plant. Once I realized that the human attraction to a plant goes beyond aesthetics, I started to research and work with the medicinal properties of magnolia. Now, I share what I have learned with you.

Magnolia bark has been used in both Eastern and Western countries for overlapping symptoms, speaking to this species' medicinal efficacy. For example in the 1800s, magnolia flowers were used to remedy asthma in the United States. In the Sierra Norte de Oaxaca in Mexico, an infusion of the flowers is used to treat asthma and to strengthen the heart. In Chinese medicine, magnolia bark works on the lungs, relieves esophageal spasms, and clears phlegm. Magnolia bark is known in Chinese medicine to move qi (energy) and dry dampness. The Choctaws used sweet bay magnolia (*Magnolia virginiana*) to "warm the blood," a description that parallels the movement of qi and drying dampness. In the 1800s, powdered magnolia bark was used as a vermifuge. The powdered bark was given to children in syrup to help expel worms and to tone the digestive organs.

The whole magnolia tree—the flowers, bark, seeds, and roots—contains medicine. Magnolia bark, roots, and seeds contain two beneficial compounds, honokiol, and magnolol, widely researched for their ability to cross the blood-brain barrier and to have a positive effect on the human body. Both honokiol and magnolol have been shown to have antimicrobial, antidepressant, antithrombotic, anticancer, antitumorigenic, and neuroprotective effects on the body. The neolignan honokiol has been shown to improve cognitive disorders such as Alzheimer's and epilepsy and can help support

healthy nerve connections. Magnolia bark from several species, including the grand magnolia, is being researched as a post-treatment for stroke patients and as a preventative for breast, colon, lung, liver, prostate, skin, cervical, and brain cancers. Magnolol and honokiol reportedly help relieve mild depression, menopause symptoms, and insomnia. Magnolol and honokiol do not absorb well in water, so many magnolia supplements contain magnolia powdered inner bark. If you decide to purchase magnolia medicine, don't get the isolated phytochemical compounds because your liver will likely metabolize those compounds without them entering into your bloodstream. I recommend taking whole a magnolia bark supplement that contains all the properties of the inner bark.

I work with magnolia inner bark and the flowers. I love to make a magnolia tincture from the flowers in the spring. I use the magnolia flower tincture for clearing sinus pressure, relieving allergies, and often before my meditation practice. It seems to open and activate the frontal brain lobe, reduce thoughts, and clear the sinuses for easy breathing. Also, I make a tincture from the inner bark to help improve sleep when I am premenstrual.

GARDENING AND LANDSCAPING

The grand magnolia makes a great accent tree when given enough space to branch out and make a statement. I recommend planting a grand magnolia in the corner of your yard. They serve as excellent trees for marking property boundaries. However, given the large leaves that drop annually, not much grows underneath a magnolia tree, so don't plant in an area where you want a garden.

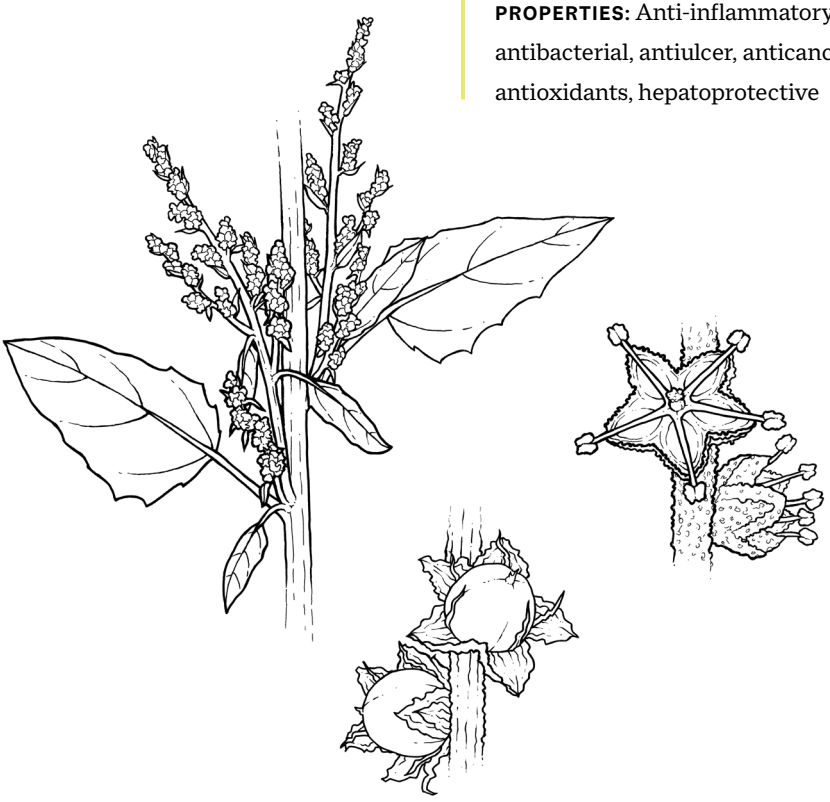
WAYS TO CONNECT WITH GRAND MAGNOLIA

- Make a tea from leaves or inner bark.
- Make an alcohol tincture from the flowers.
- Harvest the inner bark, dry it thoroughly, and grind it into a fine powder. The powdered bark may be placed in gelatin capsules for digestive support or blended with other digestive herbs and taken in warm water.
- Make a holiday wreath from the leaves.

Lamb's-quarters

Chenopodium album

OTHER COMMON NAMES: Goosefoot, wild spinach, poor man's spinach, pigweed
FAMILY: Chenopodiaceae
MEDICINAL PART: Leaves, seeds
EDIBLE PART: Aerial portion
SOLVENT: Water, alcohol
PROPERTIES: Anti-inflammatory, antibacterial, antiulcer, anticancer, antioxidants, hepatoprotective



IDENTIFICATION

Look for an upright herb (up to three to five feet tall) with alternately arranged leaves that have a triangular-shaped leaf. The leaves are toothed and have a dark-green upper surface and a white, waxy undersurface. In June, lamb's-quarters starts to bloom; however, you will likely not notice the tiny green flowers forming at the top of branches. The flowers mature into seeds in late fall.

RANGE

One of the most widely distributed wild herbs in the world, it is commonly found in India, South Africa, Australia, and the Americas. It occurs throughout the entire United States. It occurs almost everywhere except Antarctica.

HABITAT

Look for lamb's-quarters in disturbed areas with full sun and well-drained soil. It is an easy herb to find in urban and suburban areas. Look for it in vacant lots, in your garden bed, and along roadsides.

HARVEST SEASON

April to October (leaves)

MEDICINAL USE

Lamb's-quarters is primarily known as an edible wild herb, but it has medicinal uses as well. A leaf tea can relieve stomachache, diarrhea, arthritis, and rheumatism. In India, it is used to relieve coughs, piles, and dysentery. The leaves contain ascaridole and are used in India as an anthelmintic against roundworms and hookworms. Hindu physicians recognize it for the correction of splenic enlargement and liver disorders. A leaf poultice is used over wounds and bites. In Mexico, the cooked leaves and seeds are believed to keep the digestive system healthy and clean. A warm poultice of the leaves can help relieve a headache. Lamb's-quarters is also known as a blood purifier and antiscorbutic.

Lamb's-quarters is a fast growing, edible, medicinal green that every American needs in their diet, especially considering that over 90 percent of Americans don't eat enough vegetables. Along the Carolina coast, lamb's-quarters grows well and can provide a highly nutritional green from April until approximately October. This wild herb can easily be added to any vegetable or herb garden. Adding lamb's-quarters to your diet will improve your digestion by feeding your gut microbiota. I eat lamb's-quarters from late winter/early spring until the fall. I save a ton of money by not having to buy spinach, and I can tell the difference in my energy levels when eating approximately a cup of lamb's-quarters per day. I add finely chopped leaves to our black bean dishes, make lamb's-quarters yogurt dip similar to spinach dip (recipe follows), and even make lamb's-quarters stuffed bread. I like eating it

wilted or boiled and adding olive oil, lemon juice, and a pinch of salt. It is the easiest wild green you can grow in your garden and incorporate into your diet.

Lamb's-quarters has a consistency and flavor profile similar to spinach, hence the other common name for this species—poor man's spinach. It is cultivated in Northern India, Nepal, and Pakistan as a food crop known as bathua. It packs a nutritional punch, the leaves contain vitamin A, B2, B6, vitamin C, calcium, manganese, potassium, phosphorus, sodium, iron, zinc, copper, and magnesium. The young aerial portions are cooked in soups, curries, and paratha-stuffed breads.

GARDENING AND LANDSCAPING

For health-conscious wild-herb-loving people, like yourself, lamb's-quarters is a garden must-have. I am blessed that a lamb's-quarter seedling sprouted at my back door. That one seedling grew to a height of eight feet over several months. I routinely picked the leaves as I entered the mudroom every evening. That same year, I noticed my neighbor removed several large lamb's-quarters of similar size from their yard, so I knew we had a local seed source in the neighborhood. I let the one at my back door go to seed and now I have enough lamb's-quarters to share with the entire neighborhood every year.

I started cultivating lamb's-quarters and growing it along the perimeter of my raised vegetable beds. I did make the mistake of planting a lamb's-quarters in my raised beds during the summer when Swiss chard and other greens die out from the heat. It became gigantic and consumed too much space, and when I removed it from the raised beds in the fall, it left a massive hole. I recommend growing lamb's-quarters in areas adjacent to your garden or vegetable beds. As it is a wild herb, it doesn't need much care to grow. It can grow amongst monoculture grass lawns. Because lamb's-quarters will grow into the size of a large shrub if you plant it in full sun and well-drained soil, it makes the perfect wild herb to grow for beginners.

LAMB'S-QUARTERS YOGURT DIP

You will have many greens when you grow lamb's-quarters. After a while, you may get bored adding them to soups, stews, and sautéing them. An exciting and new way to work with this wild herb is by making a lamb's-quarters yogurt dip, known as Bathua Ka Raita in India. This yogurt dip is delicious with a capital *D*. My husband and daughter both love this dip, and my culinary

friend, Jesse, asked with surprise, “Did you make this?” I answered, “Yes!” *Makes 3 cups.*

- 2 cups lamb’s-quarters, thoroughly rinsed
- 2 cups of water
- 3 tablespoons olive oil
- 1 teaspoon coriander
- 1 teaspoon cumin
- 1 teaspoon mustard seeds
- 2 cups of yogurt
- 1 tablespoon of crushed garlic
- 1 teaspoon of salt

1. Add lamb’s-quarters to water. Bring to a boil.
2. After 20 to 40 seconds of boiling, remove from heat and stir thoroughly until leaves are wilted. The goal is to wilt the leaves but retain some of the vibrant green color.
3. Drain the leaves and set aside.
4. Add 1½ tablespoons of olive oil to a stainless steel or iron skillet over medium heat, and once warm, add your spices (coriander, cumin, and mustard seeds). Bloom your spices, sautéing them until you can smell the aroma, then remove from the heat.
5. Add the spice blend and sautéed lamb’s-quarters leaves to the yogurt.

6. Add the remaining 1½ tablespoons of olive oil to your skillet and lightly sauté your garlic.
7. Add to the yogurt and stir. Add salt.
8. Serve the lamb's-quarters yogurt with organic pita bread, cucumber, or carrots.

OTHER WAYS TO CONNECT WITH LAMB'S-QUARTERS

- Use the leaves as a spinach substitute in sautés, quiches, soups, stews, quesadillas, smoothies, etc.
- Make flatbread with the leaves, known as bathu paratha in India.
- Coat fresh leaves with olive and sprinkle salt and garlic powder on the leaves. Spread the seasoned leaves across a baking sheet. Bake the leaves at 350 degrees Fahrenheit for five to 10 minutes for a healthy crispy snack.
- Dry the leaves to add to supportive digestive tea blends.
- Harvest the seeds and use as a grain similar to quinoa.

Little Blue Curls

Trichostema dichotomum

OTHER COMMON NAMES: Common blue curls, forked blue curls
FAMILY: Lamiaceae (mint family)
MEDICINAL PART: Leaves, flowers
SOLVENT: Water, alcohol, oil
PROPERTIES: Anti-inflammatory, antimicrobial

IDENTIFICATION

Look for an erect annual herb, two to three feet tall, with grayish-green leaves and small purple flowers. The rhombic-lanceolate to elliptic leaves are two to four times long as wide with an entire leaf margin. In the summer attractive two-lipped purple flowers appear, with the lower lip having a white patch with speckled purple dots. The purple stamens and carpel extend out from the flower like eyelashes to ensure cross pollination by bees. Little blue curls, hereafter called blue curls, has a long flowering window, from summer until late fall. As an annual, each plant produces many seeds known as nutlets.

RANGE

Blue curls grows from southeast Canada south to The Bahamas and west into Texas.

HABITAT

Blue curls grows in open sandy habitats. Look for blue curls in disturbed sites, roadsides, old dry sandy fields, dune systems, and dry woodlands.

HARVEST SEASON

August to November (aerial portion)

MEDICINAL USE

Only a few things are known or written about the medicinal properties of blue curls. However, one sniff of the plant, and you will know it is a medicinal herb. As blue curls is an aromatic herb within the mint family, I knew that it had beneficial properties. So, I started to work with blue curls externally. From my experience, blue curls is anti-inflammatory and best used externally. You can make a liniment, infused oil, or an infusion for your bath.

Although there are no recorded uses for blue curls, other species within the *Trichostema* genus have been used as medicine, including *Trichostema lanatum* and *Trichostema lanceolatum* by the Chumash on the Pacific coast. Historically the women prepared a decoction from both plants to help facilitate the passage of the afterbirth. Also the Chumash used the leaves and stems of *T. lanatum* as a feminine wash. *Trichostema lanceolatum* has antibacterial and anti-inflammatory phytochemicals and flavonoids. While there haven't been studies looking at the medicinal properties of blue curls, the essential oil of blue curls contains twenty-one compounds, with the most dominant being sabinene (53.55%), which is antimicrobial and anti-inflammatory. Sabinene is used as a flavor and fragrance. I have often wondered if I could make a potpourri with blue curls. I steam-distilled the oil, and it smelled lovely and was invigorating. I made a tea from blue curls, and it was bitter. No parts of the plant are poisonous, so you could add a little to immune-stimulating tea blends for the antimicrobial oil sabinene. I do not recommend ingesting internally for anyone with a weak urinary system or kidney disease. Also, due to the high oil content of the leaves and flowers, I do not recommend pregnant women drink a tea with blue curls.

GARDENING AND LANDSCAPING

As an annual plant, blue curls is one of the easiest wild herbs to grow from seed. I recommend collecting seeds from a roadside population or buying seeds online. However, finding a local population is best since this species has an extensive range, and you may introduce a more aggressive genotype or a genotype that doesn't do as well as a local one. On Wadmalaw Island, South Carolina, I found one blue curl plant growing directly against a large fence where the mower obviously couldn't reach. In the winter I harvested the seeds and spread them around in my yard in sunny locations. To my surprise the following spring, I had an abundance of blue curl seedlings in my yard. They took over my front beds until my wild herb perennials, such as goldenrod, blue mistflower, and eastern horsemint became established. As an annual, blue curls does best in newly disturbed areas with full sun.

You can easily grow blue curls if you have full sun and well-drained soil. It is a gorgeous wild herb with its erect stature, light grayish-green foliage, and purple flowers. In addition to its medicinal value, blue curls can be harvested to make aromatic, anti-inflammatory body products, while also serving as an important nectar source for bees.

COMMON BLUE CURLS COOLING OIL

Blue curls smells fantastic and has a cooling effect on the skin. If you live on the Carolina coast and grow blue curls, make this anti-inflammatory cooling oil for the skin. This recipe is easy to make. I hope you give it a try. Once completed, use a tablespoon of the infused oil in your bath, to make salves, or rub on inflamed joints. To preserve the highest concentration of aromatic oils, harvest blue curls midmorning between 10:00 and 11:00 AM, after the dew has evaporated, but before the sun gets too hot. Dry the leafy branches in bundles, by tying the branch ends together and hanging the herb upside down or lay the branches on towels or old screens for approximately fourteen days. Once the herb is dried completely, powder the herb in a Vitamix or spice blender. *Makes 1 cup.*

- ½ cup of dried, powdered blue curls, leaves and flowers (aerial portions)
- 1 (½ pint) glass mason jar
- 1 cup olive oil
- 8 drops lavender essential oil (optional)

1. Add the powdered herb to your mason jar and add the olive oil over the herb until the jar is full. (It may take a little less than a cup of olive oil.)
2. Put the oil and herb into your blender and blend on high speed for 60 seconds.
3. Transfer back to the mason jar.
4. Label your jar with herb used, date, and oil. Let the herb infuse into the oil for 7 days.
5. Strain the herbs from the oil using organic muslin, a cheesecloth, or an old T-shirt. You can use a funnel to transfer the oil into glass tincture/oil bottles and keep the blue curls oil in your bathroom to apply before or after your shower or use the oil in salves.

OTHER WAYS TO CONNECT WITH LITTLE BLUE CURLS

- Make an infusion from blue curls to add to your bath.
- Add dried blue curls to potpourris.

Lizard's Tail

Saururus cernuus

OTHER COMMON NAMES: Water-dragon

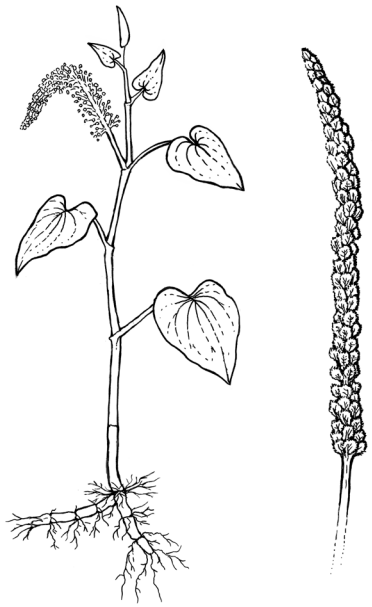
FAMILY: Saururaceae (lizard's tail family)

MEDICINAL PART: Leaves, stems, roots

SOLVENT: Water, oil (massage oil, salves), alcohol

PROPERTIES: Anti-inflammatory, antispasmodic, astringent, sedative, emollient, mild tranquilizer, antiviral

Warning: Internal use is not recommended for pregnant women. The tea has a sedative-like effect and should only be consumed in small quantities (a half cup to one cup) at home when not operating heavy machinery or driving.



IDENTIFICATION

Look for an emergent wetland plant (one to two feet tall) with dark greenish-gray, arrow-shaped leaves and a cordate (heart-shaped) leaf base. The alternately arranged leaves clasp the stem. A diagnostic feature of lizard's tail includes the spicy aromatic leaves that release a fragrant smell when crushed. Lizard's tail often forms extensive colonies due to the long underground stoloniferous rhizomes. The numerous, tiny white flowers form attractive spikes that droop in full bloom. Flowers mature into nutlets that give the spike the

appearance of a lizard's tail, hence the common name. Flowers appear from late May to September and fruit from June to November.

RANGE

From Canada (Ontario and Quebec), south to Mexico (Coahuila, Guerrero, Michoacán). Reported in Brazil and introduced to Corsica, France, and Great Britain. Lizard's tail grows in twenty-seven states from New England south to Florida, west to Texas, and north to Michigan. However it seems more abundant along the slow-flowing swamp floodplain areas along the coast.

HABITAT

Swamps, freshwater depressions, stream margins, floodplain areas, beaver ponds, and ditches. Along the coastal plain, lizard's tail forms large patches in swamps and ditches.

HARVEST SEASON

April to August (leaves and roots)

MEDICINAL USE

Lizard's tail is a wild herb with a long history of traditional use for relieving inflammation. Both the fresh and boiled root can be made into a poultice and applied externally to inflamed areas. Porcher (1869) recorded, "After the frequent employment of the boiled roots of this plant beaten up and used as an economical material for poultices, I would particularly recommend it, as the roots can be abundantly and easily obtained in almost every swamp along the seaboard" (p. 373). The Choctaw boiled and mashed the roots and used them as a poultice for wounds and inflamed breasts. The Choctaw and early American settlers made tea from the whole plant to remedy fever, rheumatism, and stomach ailments. Further, lizard's tail medicine in the 1800s was known as an antispasmodic, an astringent, a sedative, a mild tranquilizer, and an emollient and to treat pleurisy (inflammation of the pleura or sacs around the lungs).

Given the many traditional uses of lizard's tail, much scientific research has been conducted on this wild herb in vitro (in lab/test tube) and in vivo (within living beings). The essential oils within lizard's tail have been shown to inhibit several types of viruses, including herpes simplex, influenza, and human immunodeficiency virus (HIV). Further, this plant species contains

lignans and neolignans that have been shown to inhibit the growth of cancerous tumors. Given the traditional root poultice application on inflamed breasts, scientists have investigated whether lizard's tail is cytotoxic to breast cancer cells. Modern science revealed that the lizard's tail alcohol extract has a high cytotoxic (toxic to living cancer cells) effect on breast carcinoma cell lines tested in the lab. The genus *Saururus* has shown to have 147 phytochemicals, including lignans, flavonoids, alkaloids, anthraquinones, saponins, and phenols. These phytochemicals within lizard's tail make it a valuable wild herb and support the many traditional uses of this plant.

This herb has many medicinal uses similar to its only congener (species within the same genus), Asian's lizard's tail (*Saururus chinensis*). In southeast Asia, lizard's tail is used for inflammation, edema, jaundice, gonorrhea, and as a diuretic. It helps to clear heat, resolve toxins, and disperse swelling. According to herbalist CoreyPine Shane, the whole plant is used to treat poisonous insect bites, blood in the urine, diarrhea, sores, and carbuncles. You can purchase Asian lizard's tail online, where it is advertised as a detoxifying agent, a tea to relieve back and breast pain and stomach ailments.

Many plants in the lizard's tail (Saururaceae) family are considered herbs worldwide. For example, yerba mansa (*Anemopsis californica*), is a popular herbal plant in California. You can purchase this herb from different companies, even Walmart. It is advertised to relieve viruses, sexually transmitted infections, inflammation, swollen gums, kidney stones, diaper rash, and many more ailments.

When I first learned about lizard's tail, I was perplexed by its forgotten use given its effective anti-inflammatory properties. The unfortunate displacement of Indigenous people in North America resulted in this herb and many others being lost in time. The first time I chewed a lizard's tail leaf, I knew it was a medicinal plant. The taste and feel of lizard's tail was cooling and relaxing, and the taste and smell of the herb made me want to learn more about it. My connection with this herb grew through research, practice, and admiration. I make a leaf and root poultice for inflammation and, infrequently, a leaf tea. You will realize the anti-inflammatory power of lizard's tail after making an oil or poultice—it is very cooling. Plus this herb's aromatic smell helps to relax the mind and body. The leaf tea has a strong sedative effect on the mind and body. Only prepare and consume the tea when at home for the day or night as it is a sedative.

GARDENING AND LANDSCAPING

In the southeast, lizard's tail has attractive foliage almost year-round, making it a great medicinal plant to add to your water garden. The beautiful drooping white inflorescences will add color and movement to your garden. Since this species is an emergent wetland plant, you must plant it in a water or rain garden. I filled a large shallow pot without holes, two feet by two feet, with soil and planted lizard's tail. Lizard's tail thrives, as long as I keep the soil consistently moist. Lizard's tail is a resilient plant that most people can grow, including you.

ANTI-INFLAMMATORY LIZARD'S TAIL POULTICE

To experience the cooling, anti-inflammatory effects of lizard's tail, chew a tiny piece of the leaf or tear and crush one leaf, and rub it on your skin. If you like how it smells and feels on your skin, try this poultice recipe. Inflammation is our body's way of communicating that something is imbalanced and needs healing. By using this poultice where you feel inflammation, you will facilitate your body's healing process. A lizard's tail poultice is excellent to use for sprains, tired backs, arthritis, and any tendonitis. You can make this recipe using solely leaves or a combination of leaves and roots. *Makes 1 treatment.*

3 to 5 leaves of lizard's tail, rinsed
1 (3- to 5-inch) root of lizard's tail, rinsed
1 tablespoon olive oil or any carrier oil

1. Using a mortar and pestle, crush the leaves and roots until they form almost a paste.
2. Add one tablespoon of olive oil.
3. Continue to use the mortar and pestle to mix the leaves and roots with the olive oil.
4. Using a spoon, scoop out the poultice and carefully apply to the area where you are experiencing inflammation.
5. You can cover the area with an old T-shirt.
6. Endeavor to leave the poultice on the skin for at least 10 to 15 minutes.
7. Carefully remove the poultice and add it to your compost.

OTHER WAYS TO CONNECT WITH LIZARD'S TAIL

- Make a lizard's tail salve.
- Add dried leaves to antistress tea blends.

Passionflower

Passiflora incarnata

FAMILY: Passifloraceae

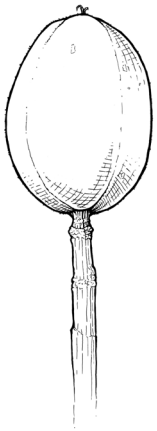
MEDICINAL PART: Leaves, flowers, roots

EDIBLE PART: Leaves, flowers, fruit

SOLVENT: Water, alcohol, glycerin

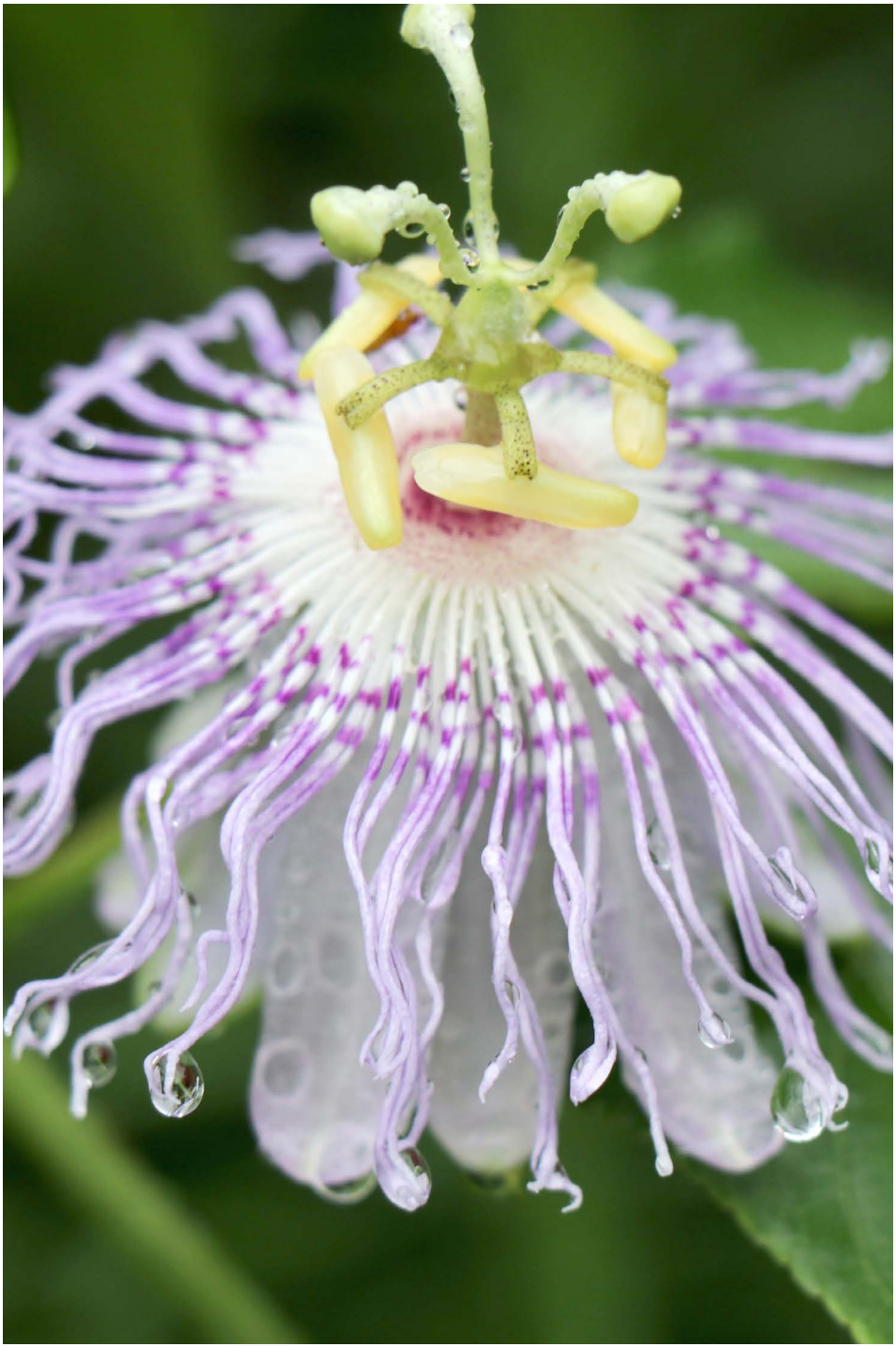
PROPERTIES: Nervine, sedative, cardiotonic, neuroprotective, antidepressant, antispasmodic, hypnotic, anodyne; the fruit is a nutritive tonic and diuretic

Warning: Passionflower may interact with and increase the effect of certain sedative medications including phenytoin (Dilatin), barbiturates, benzodiazepines (Xanax and Valium), and drugs for insomnia such as Zolpidem, Zaleplon, Eszopiclone, and Ramelteon. Keep in mind that passionflower is a good alternative for sedative prescription drugs, but don't take both. Do not take passionflower supplements, tinctures, or glycerites when pregnant.



IDENTIFICATION

Passionflower is an unmistakable vine when in bloom. The dazzling purple flowers instantly catch the eye with the circular purple filaments above the five light purple petals. The three-lobed stigma (female part) extends beyond the petals, ensuring cross-pollination. Look for glabrous (not hairy) leaves that are deeply trilobed with axillary tendrils at the base of the petiole. Also look for two tiny nectar glands that secrete nectar called extrafloral nectaries



at the leaf base. Passionflower has a symbiotic relationship with ants, the ants receive nectar in reward for protecting the vine from potential insect herbivores. The flowers mature into tennis ball-size globular green fruits known as maypops. Inside, the fruit contains many seeds covered by a tasty, edible gelatinous yellow pulp.

RANGE

Southern New Jersey south to Florida; southwest Pennsylvania, Ohio, and Oklahoma.

HABITAT

Look for passionflower in open fields, roadsides, fencerows, backdunes, and along riverbanks. Passionflower grows in open, full sun conditions where the soil is well drained. As a vine, it often grows on top of shrubs and trees that form hedges.

HARVEST SEASON

May to July (leaves), August to September (fruit)

MEDICINAL USE

Passionflower is a beloved wild herb used by humans for several thousand years, probably since time immemorial. Seed remains have been discovered at prehistoric archaeological sites in Virginia. The Algonquin and Creek people of Virginian and Florida, respectively, foraged wild passionflower and cultivated the plant. Wherever passionflower grows, humans find many uses for all parts of the plant. There are historical accounts of how the Cherokee mixed the fruit with cornmeal to make a social drink. Also, historical reports show how Indigenous people, namely Powhatans, grew passionflower amongst their cornfields. The roots were used for skin conditions, such as boils, and to "draw out inflammation." Additionally the roots were boiled to make a decoction to relieve earaches.

Today passionflower is a popular nervine that helps relieve anxiety, stress, and insomnia. Other reported uses for the aerial portion of the plant include epilepsy, mild depression, and premenstrual syndrome (PMS). Passionflower increases gamma-aminobutyric acid (GABA) activity levels in the brain, producing a calming effect. Passionflower is non-habit

forming. You can work with the medicine long term for conditions such as anxiety, depression, and insomnia without addiction problems or withdrawal symptoms. In India and Asia, passionflower has been used to help patients overcome opiate, alcohol, and tobacco dependency. In America, passionflower is considered a supplemental herb that may help relieve nervous tension. This wild herb has been shown to have estrogen-inhibiting effects due to the flavone chrysin. It may reduce circulating adrenal-derived estrogen from peripheral tissues and may explain why this herb is effective for premenstrual syndrome, an estrogen-dominant disorder. Chrysin also reduces anxiety by interacting with a GABA receptor.

I work with passionflower when I am experiencing either tension or interrupted sleep associated with PMS. I believe that this wild herb should be used symptomatically for best results, only taking when you need it. I make a passionflower tea (recipe follows) and a passionflower glycerite and alcohol tincture.

Passionflower's leaves, flowers, and fruit are edible. In the summer, I forage the leaves, finely chop them, and toss them into bulgur and quinoa salads. The leaves sweet and slightly bitter. May through the beginning of August is the best time to forage the leaves. Around mid-August, you will have to compete with the fritillary butterflies because they lay eggs on the leaves, and the caterpillars, not you, get the passionflower buffet. However, the passionflower fruit known as maypops matures around that time, and you want to transition your attention from the leaves to the fruit anyways. You want to look closely at the vine because the green maypops blend in well with other green vegetation. Once I find a maypop, I look at the vine daily to weekly, watching and anticipating when it will start to transition from green to yellow and wrinkled, which is when you know it is ripe. Also the maypop will easily fall into your hand when you go to pluck it, and often, the ripe fruit falls to the ground. So search around your vine for mature fruit on the ground. When I collect maypops from the yard, it always makes me connect with my inner child because I feel like I am easter egg hunting. Make sure the fruit is ripe before picking because the difference in taste between ripe and unripe fruit is night and day. Eating the ripe fruit is like entering into a tropical oasis. The priceless yellow, tangy pulp surrounding the seeds tastes like tropical punch, and you don't want to waste any of that goodness. I admit to eating the *whole* seed. I even add the seeds and pulp to smoothies.

The fruit is a healthy addition to your diet because it has a broad spectrum of nutrients, such as vitamins, fiber, minerals, and bioactive compounds. The seeds contain health-promoting lipids, proteins, minerals, and insoluble fiber too. Other *Passiflora* fruit, such as *P. edulis* and *P. alata,* are used to make jams, desserts, and flavorings for ice cream.

GARDENING AND LANDSCAPING

I cannot think of another wild herb that is as attractive and useful as passionflower. Once Passionflower gets established in your yard, you will have it forever. Passionflower will only grow in your yard if you have full sun. Also it thrives best in the hot, westerly aspect of the sun. I have a massive patch of passionflower on the western side of my house that I found growing naturally on my hedgerow. I trimmed back the vegetation surrounding the wild passionflower population, and the herb exploded. It is thriving, to say the least. I have shared numerous new sprouts with students and members. Also I was able to transplant some to the south side of my house where there is full sun. It is doing well but not spreading like the vine on the western side. So, it seems passionflower prefers the noon to sunset hours of sunlight. In the afternoon to evening hours, the flowers are wide open, and the pollinators are swarming and dancing around the vine. Passionflower can tolerate a variety of soil conditions but prefers well-drained soil. Once you find a wild passionflower population you can easily propagate it from seed, stem cutting, or from clipping a piece of the root with a few leaves. I have successfully propagated passionflower from stem cutting by putting four- to six-inch stem cuttings in water with willow stem cuttings (the salicylic acid in the willow stem stimulates root formation). It takes approximately ten to fourteen days to see roots. If you want to propagate passionflower from seed, soak the seeds in warm water for two days, scarify the seed by nicking it with a knife, and then sow when daytime temperatures reach seventy degrees. Once established, passionflower is a wild garden herb you can share with friends and family for many years.

BULGUR PASSIONFLOWER SALAD

This bulgur passionflower salad recipe came to fruition when I needed a nutritional salad to help heal my digestive system by boosting my fiber intake. Bulgur contains a high amount of dietary fiber, approximately 18 g

of fiber per 100 g of bulgur. Also, it contains B vitamins, potassium, folate, magnesium, vitamin A, calcium, and antioxidants, unlike most grains. Bulgur is anticarcinogenic to the colon, antidiabetic, antimicrobial, and an immunomodulator. Add beets, carrots, pumpkin seeds, passionflower leaves, mint or basil leaves, olive oil, and lemon juice to bulgur, and you have a healthy cancer-fighting salad.

Often when I make this salad, I forage a handful of passionflower leaves and other wild green edibles, such as wild lettuce leaves, Spanish needles leaves, and dandelion greens. Your goal is to have approximately two cups of finely chopped greens in your salad. *Makes 4 servings.*

- 1¾ cups water
- 1 cup organic bulgur (buy from bulk health food store)
- 1 organic beet, rinsed, peeled, and grated
- 2 to 3 organic carrots
- 1 cup finely chopped passionflower leaves
- 1 cup finely chopped basil or mint leaves (optional) or other wild greens such as wild lettuce
- 1 cup organic raisins
- ½ cup organic pumpkin or sunflower seeds
- ⅓ cup olive oil
- Juice of ½ lemon
- ¼ cup maple syrup (optional)
- 1 teaspoon salt

1. Bring water to a boil. Add bulgur and return to a boil. After boiling, turn off heat and allow pot to sit on the stove covered for about 25 minutes. After that time, drain any remaining water and place the cooked bulgur in a glass bowl.
2. Grate the beet directly into your glass bowl. Next shred the carrots directly into the bowl. Add the chopped greens and using a wooden spoon stir the beets, carrots, and greens into your salad. You should see a beautiful swirl of colors.
3. Now add your raisins, seeds, olive oil, lemon juice, and maple syrup. Mix thoroughly.

OTHER WAYS TO CONNECT WITH PASSIONFLOWER

- Add the leaves to salads in the summertime.
- Dry and store the leaves and flowers for tea throughout the fall and winter.
- Make an herbal infusion/tea from the aerial portion and drink two to three cups per day during times of high stress, PMS, or when experiencing insomnia.
- Eat the maypops/fruit late summer and throughout the fall. Add the fruit to smoothies.
- Make a tincture or glycerite from aerial portions to relieve stress, anxiety, PMS, or periods of insomnia.

Prickly Ash

Zanthoxylum clava-herculis

OTHER COMMON NAMES: Hercules club, toothache tree

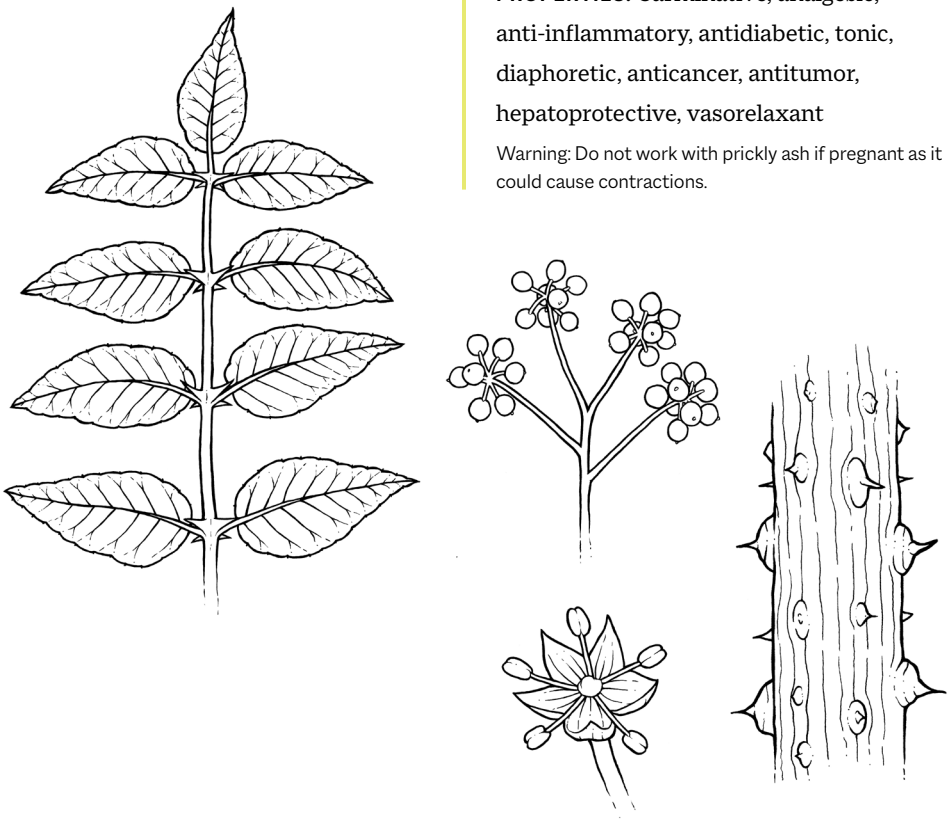
FAMILY: Rutaceae (citrus family)

MEDICINAL PART: Leaves, inner bark, roots, fruit

SOLVENT: Water, alcohol

PROPERTIES: Carminative, analgesic, anti-inflammatory, antidiabetic, tonic, diaphoretic, anticancer, antitumor, hepatoprotective, vasorelaxant

Warning: Do not work with prickly ash if pregnant as it could cause contractions.



IDENTIFICATION

Prickly ash is a spiny small tree (fifteen to thirty feet) with highly aromatic leathery pinnately compound leaves. The tree branches and trunk are covered in spines and are often confused with those of spikenard (*Aralia racemosa*). On larger, mature branches and trunks, the spines become elevated on conical corky bases, giving the trunk an odd appearance. The leaves have punctate glands and prickles along the rachis. This tree looks similar to

ash trees due to the compound leaves, and this is how the common name—prickly ash—came about. The greenish-white flowers appear April to May and mature into fruit July to September. If you think you found prickly ash, simply confirm its identification by crushing and confirming the pungent citrus smell of the leaves.

RANGE

Southeast endemic, growing from the southeastern tip of Virginia south to Florida and west into Texas, Arkansas, and Oklahoma. Due to development along the coast, prickly ash is becoming rare in several states, including Virginia, North Carolina, and Georgia.

HABITAT

Look for this species growing in maritime forests, along dunes, shell middens, shell hammocks, maritime scrub forest, and on inland hammocks.

HARVEST SEASON

Year-round (inner bark)

MEDICINAL USE

With more than four hundred plant phytochemicals, including alkaloids, flavonoids, coumarins, lignans, sesquiterpenes, and monoterpenes, identified in the genus *Zanthoxylum* and a long list of worldwide traditional use, you could say that prickly ash belongs on a top-ten list of coastal medicinal plants in the Carolinas. Sadly it is becoming a rare tree due to development, so I rarely ever forage it, and I highly recommend growing a tree instead of foraging branches from the wild.

Prickly ash, or toothache tree, contains phytochemicals such as coumarins that help promote blood flow and reduce inflammation. All you have to do to experience prickly ash medicine and healing properties is chew one leaf or chew on the end of a small woody twig. It will make your mouth tingle and has a cooling numbing effect. It became known as the toothache tree because Indigenous people and early settlers used it to relieve toothaches. The numbing effect and prickly ash's anti-inflammatory properties can quickly relieve pain. My favorite prescription for relieving inflammation caused by acute injury is a Carolina willow and prickly ash tincture combined. Once

I reinjured my torn rotator cuff by chucking a ball to my husband on the beach. Thankfully I had a both a Carolina willow and prickly ash tincture, and after seven days of taking the tinctures combined, the inflammation from my shoulder was completely gone. I was amazed. So I can attest to the anti-inflammatory properties of prickly ash.

Other historical uses of prickly ash include relieving gout, inflammation, diabetes, and hypertension. Common prickly ash (*Zanthoxylum americanum*) has extensive use by Indigenous people, with a decoction of the inner bark being used to relieve stomach pain, back pain, coughs, colds, itching, toothaches, fevers, heart trouble, and to rid the body of worms. The entire tree is useful, from the leaves to the roots. However, the most powerful medicine is a decoction or tincture of the inner bark. The leaves can be gathered and used as a moving herb to enhance circulatory, anti-inflammatory, or immune-stimulating tea blends. The berries can be used as wild Sichuan (or Szechwan) pepper. Sichuan pepper is made from *Zanthoxylum* species in China and is known as flower pepper. I haven't been lucky enough to find a fruiting prickly ash. During the prickly ash flowering stage, I have noticed swarms of caterpillars feeding on the leaves, which may be why the stand I visit hasn't produced fruit yet.

GARDENING AND LANDSCAPING

Prickly ash is a great accent tree in any coastal yard. Not only does it provide a constant source of medicine throughout the year, but it has attractive foliage. Plant a prickly ash in an area with full sun and well-drained soil. I don't have prickly ash in my garden yet, but I hope to propagate by stem cutting or a root sucker. I hope prickly ash will become more available in the native nursery plant trade.

HOW TO CONNECT WITH PRICKLY ASH

- Nibble on the leaves while in the field or the tip of a young stem to experience the numbing and cooling properties.
- Collect the leaves and dry for circulatory, anti-inflammatory, or immune-stimulating tea blends.
- Make an alcohol tincture from the inner bark using 190-proof alcohol.
- Collect the fruit to make spice blends.

Red Bay

Persea borbonia

FAMILY: Lauraceae (bay family)
MEDICINAL PART: Leaves, stems, root bark
SOLVENT: Water, alcohol, oil
PROPERTIES: Analgesic, stimulant, emmenagogue, diaphoretic, antiemetic/antinausea, antimicrobial

IDENTIFICATION

An evergreen understory tree (thirty to fifty feet tall) that grows in the subcanopy. Look for a small tree with thick, six-inch leathery leaves with a dark green upper surface and a grayish, glaucous (whitish waxy coat) undersurface. The unlobed, simple leaves have an entire leaf margin, no serration, and they grow in an alternate arrangement along the stem. Another important distinguishing characteristic of bay trees is that the younger stems have greenish twigs whereas the older bark and stems will have reddish-brown bark with irregular furrows. If you're in doubt, all you have to do to confirm your identification is crush the leaves, and if you smell a warm, spicy aroma,

you have a bay tree. Pale, inconspicuous yellow flowers appear mid-May to June and mature into dark, blue drupes September to October. The bay trees also serve as host plants for Palamedes swallowtail (*Papillo palamedes*) and spicebush swallowtail (*Papillo troilus*), providing leaves for the butterflies to lay their eggs.

The first time I stumbled upon a red bay tree in the Lowcountry of South Carolina, I harvested a handful of leaves for my family for Christmas. This has become a beloved tradition; I add three Bay leaves to my gifts every winter. Anytime I set foot in the Lowcountry, I come home with a bay leaf or two in my purse. Nothing is better than foraging an herb from the wild to replace an herb you commonly buy from a grocery store. The red bay has been affected by laurel wilt, caused by the fungus *Raffaelea lauricola*. So if you see a red bay tree with dead stems or dead leaves on the tree, it has likely been affected by the fungus. I don't recommend foraging from trees with laurel wilt.

RANGE

Eastern North Carolina south to Florida and west into southeast Texas.

HABITAT

You can find red bay growing along dune systems and in the understory of the maritime forest. It thrives in full sun in the dry sandy soils on barrier islands. I have often noticed mature red bay trees along beach paths. The leaves are a little smaller given the sun, salt, and wind exposure on the beach. Laurel wilt disease seems more prevalent in the maritime forest where the bay trees receive less light. The red bay trees along the windy beach paths where they receive ample sunlight always appear healthy without many drooping brown leaves. Along the coast, you can find bay trees growing in vacant lots and along old fencerows, so keep your eyes open.

HARVEST SEASON

Year-round (leaves)

MEDICINAL USE

Due to their pleasant flavor and aroma, bay leaves are a popular herbal seasoning. Bay leaves are added to soups, stews, and gumbo. The most common and popular bay leaf you likely buy from the grocery store is the bay laurel

(*Laurus nobilis*). However, red bay and swamp bay (*Persea palustris*) make a fantastic native alternative. red and swamp bay also contain antimicrobial oils that dissolve in hot water. The leaves make a great addition to any herbal tea blend. A leaf decoction can help relieve headaches, fevers, and a tummy bug.

The Seminole use bay leaves to treat a variety of disorders (up to twenty-six treatment prescriptions for this species) including constipation, blocked urination, fever, diarrhea, appetite loss, and vomiting in children. They hold this sacred herb close to their hearts and consider it a panacea. The leaves are burned for purification to remove impurities and negative energy. Lastly, the wood is used to make ladles and bowls.

I love to add bay leaves to antinausea tea blends whenever my daughter gets the tummy bug (recipe follows). Also, I add bay leaves to my Tuesday night Crock-Pot of black beans, soup, or stew.

GARDENING AND LANDSCAPING

Red bay makes an attractive accent tree or foundation planting approximately ten to fifteen feet from the foundation at the south or southwest corner of a home. I planted two bay trees at the south side of our house at this distance. I enjoy watching them grow every day. Once established, red and swamp bay don't need anything to thrive except full sun and well-drained soil. You can buy seeds or saplings online. However if you live along the coast, I recommend finding a fruiting bay tree and attempt to grow from seed, or, better yet, rescue a bay tree from a development area. Red bay is becoming rare along the coast, given development, but if more people started connecting with red bay for medicine and rescuing them from development, we could save a lot of genetic diversity. I saved a red bay from development, transplanted it to my yard in full sun, and watered it well for seven days, and it survived.

ANTINAUSEA AND ANTISTRESS BAY TEA

Red bay tea is warming and slightly spicy. The antimicrobial leaves not only help fight the bacteria or virus causing the upset stomach but also help relax the stomach muscles. Combine with antinausea catnip and ginger and you have a healing antinausea tea blend that can be called upon any time there is stomach upset. I purchase loose organic catnip leaves from Frontier Co-op or Mountain Rose Herbs. *Makes 1 serving.*

5 to 6 bay leaves
1 teaspoon ground ginger
2 cups water
2 tablespoons catnip
1 tablespoon honey

1. In a quart-size stainless steel pot, add bay leaves, ginger, and water and bring to a boil. Once boiling, reduce heat to low and add the catnip. Cover and simmer for 10 minutes. Turn heat off and let the decoction infuse for another 10 minutes.
2. Strain the plant material out.
3. Add honey to taste.
4. Drink ½ cup three times per day.

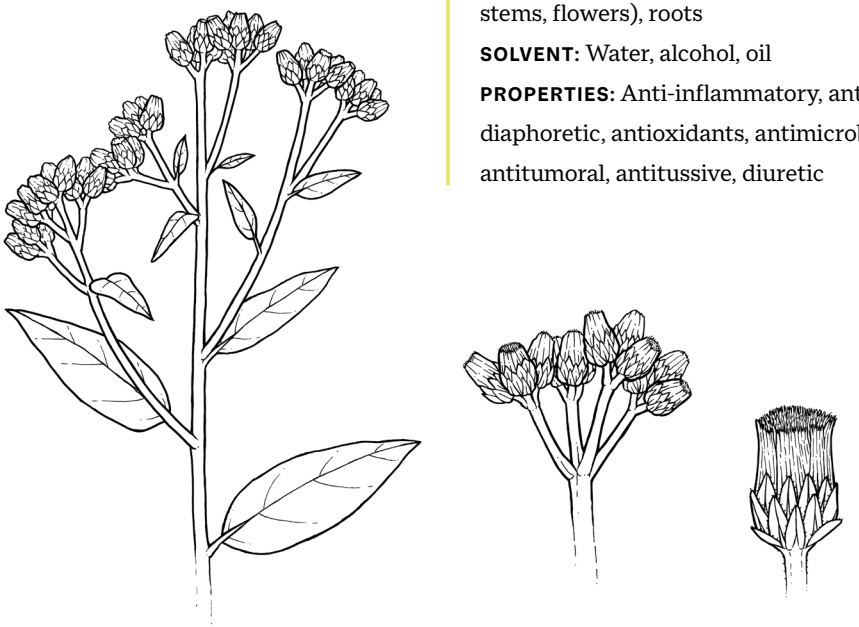
OTHER WAYS TO CONNECT WITH RED BAY

- Use in clearing incense smoke blends, combines well with eastern red cedar/juniper.
- Add leaves to soup and stews.
- Add to spice and seasoning mixes.
- Make a decoction to add to a bath.
- Make an anti-inflammatory liniment from the leaves.
- Make an anti-inflammatory oil from the leaves.

Saltmarsh Fleabane

Pluchea odorata

CLOSELY RELATED SPECIES: Marsh fleabane, camphorweed (*Pluchea Camphorata*); cure-for-all (*Pluchea carolinensis*)
FAMILY: Asteraceae (aster family)
Medicinal Part: Aerial portion (leaves, stems, flowers), roots
SOLVENT: Water, alcohol, oil
PROPERTIES: Anti-inflammatory, antiulcer, diaphoretic, antioxidants, antimicrobial, antitumoral, antitussive, diuretic



IDENTIFICATION

Look for an upright herb, two to three feet tall, with pinkish to auburn flowers and grayish green leaves. Fleabane belongs to the aster family but does not have the classic daisy flower because the inflorescences are composed entirely of disc florets. The grayish green leaves arise in an alternate fashion along the stem almost appearing as clasping due to the short petioles. The odoriferous leaves are coarsely pubescent on the undersurface and are serrated along the leaf margin. If in doubt on identification, squeeze the leaves and flowers to determine if they have a strong odor similar to sage.

RANGE

Saltmarsh fleabane grows from Massachusetts south to Florida and west into Texas.

HABITAT

Both fleabanes grow in wetland habitat. Marsh fleabane grows in freshwater wetland habitats, such as floodplain oxbow ponds, wet clay flatwoods, floodplain forests, and alluvial swamps. Saltmarsh fleabane grows along salt and brackish marshes and interdune swales.

HARVEST SEASON

August to October (aerial portion)

MEDICINAL USE

One sniff of fleabane will clue your olfactory senses into the fact that this herb is medicinal. I will never forget the first time I smelled camphorweed (*Pluchea Camphorata*). With one squeeze of the leaves and flowers, I was taken back by the pungent sage-like aroma. It was love at first sniff.

As most asters are antimicrobial, both antibacterial and antiviral, thanks to an assortment of phytochemicals, specifically terpenoids, I knew that saltmarsh and marsh fleabane could be a go-to wild herb for common colds and the flu. Since first meeting fleabane, I have used it as a supportive herb in immune-stimulating tea blends for colds, flu, and COVID-19. Whenever my daughter gets sick, undoubtedly, marsh fleabane is added to an immune-stimulating decoction (recipe follows).

Another common name for fleabane is cure-for-all, which highlights the health-promoting phytochemicals within the aerial portions (leaves, stems, and flowers). The genus *Pluchea* consists of eighty species, of which sixteen have recorded uses. The common name fleabane speaks to the wild herb being used to repel fleas. Saltmarsh fleabane has served as a traditional remedy for inflammation, fainting, hemorrhoids, stomach issues, fevers, colds, rheumatism, tuberculosis, and epilepsy in children. The *Pluchea* genus contains a vast assortment of phytochemicals, including flavonoids, tannins, phenolic acids, sesquiterpenoids, monoterpenes, lignan glycosides, chlorogenic acid, and triterpenoids. The triterpenoids, monoterpenes, and sesquiterpenoids of the *Pluchea* genus make this a wild herb to turn to when sick. Also sesquiterpenoids within the Asteraceae family and specifically the *Pluchea* genus have been shown to be anti-inflammatory and anticancer.

In the Caribbean islands, saltmarsh fleabane is a traditional remedy for stomach issues, including indigestion and constipation. Also the aerial

portions are used to make lotions and oils to combat inflammation. Other recorded uses in Jamaica and Cuba include use for children's epilepsy and fainting. A decoction is also used to help before and after childbirth.

In Louisiana, the Houma people turned to fleabanes often. Frank Speck wrote in *Primitive Man* that "entire plant with blossoms gathered in fall and preserved to make a boiled tea to reduce fever. Same is taken to cure piles" (1941, p. 63). Both saltmarsh and marsh fleabane are strong medicinal plants that deserve a place in any wild herb garden. With many fleabanes having the common name cure-for-all, what isn't to love?

GARDENING AND LANDSCAPING

I collected seeds the first time I spotted marsh fleabane along the Black River in South Carolina. I had those seeds in my pocket for several days. Eventually they made their way out of my pocket as I tossed them into the front yard. Lo and behold, the following year, this pungent seedling popped up right at the foot of my stairs. It popped up where I couldn't miss it. It popped up where I see it every day.

If you live along the Carolina coast, I am confident that, as a reader of this book, you need marsh or saltmarsh fleabane in your garden. You will enjoy the pink- to mauve-colored disc florets visited by a vast array of pollinators. Saltmarsh and marsh fleabane need full sun, and as marsh plants, they prefer moist soil. I *adore* having marsh fleabane in my garden. Its pink flowers stand out amongst a sea of yellow and purple.

FLEABANE CURE-ALL TEA

This recipe for fleabane cure-all tea manifested when my daughter was sick with a virus. She had a 101 fever, a headache, and chills, all telltale signs of a viral infection. So I went outside and foraged a few marsh fleabane stems, goldenrod (*Solidago* spp.), life everlasting (*Pseudognaphalium obtusifolium*), and one eastern horsemint sprig. In this recipe, marsh fleabane is the chief herb, forming the base, goldenrod

and life everlasting are supportive herbs, and eastern horsemint is the assistor. You want at least one cup of fresh herbs or a half cup of dry herbs to two cups of water. When you are helping the body recover from a virus, you want to make a strong tea/decoction. You want to make a decoction instead of a light herbal infusion. I recommend drinking three cups of this decoction per day, once in the morning, once in the afternoon, and once in the evening, until symptoms improve. I try to get Annarose to drink a half of cup three times per day. This decoction will make you thirsty, so be sure to drink plenty of water. I hope these wild herbs already grow in your garden, and, if not, that you will collect their seeds from wild populations along roadsides, or, better yet, rescue the wild herbs from a development. *Makes 2 servings.*

- ½ cup marsh or saltmarsh fleabane
- 1 sprig goldenrod
- 1 sprig life everlasting
- 1 sprig eastern horsemint
- 2 cups water
- 2 teaspoons maple syrup or raw honey (add honey when tea is warm not hot).

1. Chop the above wild herbs until you have 1 cup. You can de-stem the leaves or boil the stems too as they contain medicine as well.
2. Bring water to a boil. Add the wild herbs to the boiling pot, turn your stove to the lowest setting, and let the decoction simmer for 15 minutes. After 15 minutes, turn off your stove and let the infusion simmer for another 15 minutes covered. After the full 30 minutes, the decoction should be a light to dark brown color. When you see the brown color, you know the decoction is ready.
3. Strain the herbs.
4. Add maple syrup or honey to taste.

OTHER WAYS TO CONNECT WITH SALTMARSH FLEABANE

- Make an herbal infused oil for inflammation.
- Make an immune-stimulating tincture.
- Add dried fleabane leaves to smudge or incense bundles.

Sea Myrtle

Baccharis halimifolia

OTHER COMMON NAMES: Groundsel tree, manglier

FAMILY: Asteraceae (aster family)

MEDICINAL PART: Leaves, stems, root

SOLVENT: Water, alcohol, glycerin

PROPERTIES: Antimicrobial, anti-inflammatory, antispasmodic, analgesic, stimulant, rubefacient, astringent, antiviral, demulcent (roots)

Warning: I do not recommend working with sea myrtle during pregnancy.

IDENTIFICATION

Look for a shrub with stiff, upright branches with bright green, waxy leaves. The alternately arranged leathery leaves are coarsely toothed near the leaf apex. They are green on the upper surface and dull, grayish-green on the undersurface. When you find sea myrtle, tear a leaf in half to confirm your identification by checking to see if it has a sharp aromatic smell similar to fresh goldenrod. The female and male flowers occur on separate shrubs (dioicous).

In the fall you can easily find female sea myrtle shrubs, as the flowers look like tiny white pom-poms. The female flowers mature into seeds tipped with silvery-white hairs. The female flowers serve as an important nectar source for the monarch butterfly. The male flowers, not as showy as the female, are a more yellowish creamy color.

RANGE

Southeast Massachusetts south to Florida, west to Texas, Arkansas, and Oklahoma, and also in the West Indies.

HABITAT

Sea myrtle grows along brackish marshes, marsh borders, hammocks, moist abused land, roadsides, ditches, old fields, and a wide variety of disturbed places. If you live along the Carolina coast near a marsh, sea myrtle likely grows in your yard.

HARVEST SEASON

Year-round (leaves)

MEDICINAL USE

The common names of this plant, consumption weed, sea sage, and silver sage, speak to its traditional use for consumption (tuberculosis) and respiratory issues. Traditionally the leafy branches were combined with life everlasting and buttonbush (*Cephalanthus occidentalis*) to treat a cold. Porcher (1869) wrote, "A strong decoction of the root may be drank several times a day. It is slightly bitter and mucilaginous to the taste" (p. 460). The roots contain baccharine, an alkaloid known in medicine for treating respiratory diseases and fever. For ease of collection, I primarily use the leaves rather than the roots when preparing medicine. Aromatic and bitter, the leaves help clear infections and support digestion. Next time you overeat, chew a leaf of sea myrtle to ease the discomfort or if you have sluggish digestion, eat a leaf before eating a meal to help your stomach break down the food.

Given the abundance of this wild herb and its extended traditional use for respiratory conditions, it could easily become a common home remedy. The leafy tips make a solid bitter tea that not only supports the lungs but also aids digestion. In Louisiana, where it is known as manglier tea and reported

as anti-inflammatory and antiviral, it is used as a folk remedy for fevers, congestion, colds, pneumonia, stomach cramps, and as an energy booster.

Unsurprisingly this herb is reported as both antiviral and antibacterial. It is a powerful immune stimulant similar to many of its aster relatives. Research conducted on this herb has shown that it helps with insulin resistance and weight loss.

GARDENING AND LANDSCAPING

If you live near a coastal marsh, you likely have sea myrtle growing in your yard. This wild herb produces a prolific quantity of pappus seeds that make it a successful disperser. I find up to twenty new sea myrtle bushes growing in my yard yearly. Sea myrtle can tolerate a wide range of conditions but prefers full sun and moist, well-drained soil. As sea myrtle grows fast and stays evergreen green year-round, it makes a great foundation planting. I have several that volunteered at the base of our home's foundation, and they provide structure to the garden and give us privacy on the deck. Plus, I can easily reach over the railing and nibble a leaf anytime. You can plant sea myrtle as a hedge or privacy fence. If you transplant seedlings or young plants, do so in the spring or fall and water for at least seven days following the transplant. I have lost several transplants due to not watering them well after planting. Sea myrtle is an important nectar source during the fall migration season when monarchs need abundant fuel sources along the coast. If you live near the marsh, you should have a sea myrtle in your yard for the migrating monarchs. Seeing the monarch butterflies feed on the nectar is priceless. There is nothing more nourishing than supporting both wildlife and your own body by reaching over the railing, and with gratitude, collecting a leaf of sea myrtle when you are unwell.

SEA MYRTLE DIGESTIVE TEA

Imagine it's the holidays and you have eaten too much. You are bloated. An easy wild herb you can turn to along the Carolina coast for improving digestion is sea myrtle. This simple, bitter aromatic tea enjoyed after dinner will help you digest your food. I combine the sea myrtle with ginger and a splash of lemon juice. *Makes 1 serving.*

1 tablespoon chopped fresh sea myrtle leaves or 1 teaspoon dried, crushed leaves
1 slice fresh ginger
1½ cups water
½ teaspoon lemon juice or one squeeze of lemon
Honey to taste (optional)

1. Add one tablespoon of chopped fresh sea myrtle leaves to a French press or ceramic mug.
2. Add ginger.
3. Add the water. Let steep for 5 to 10 minutes.
4. Strain the leaves and ginger.
5. Add honey and lemon to taste.

OTHER WAYS TO CONNECT WITH SEA MYRTLE

- Collect male, immature flowering branches before they fully open to use in herbal fall wreaths. (Look for small yellow blooms, the female flowers are white and fluffy, like pom-poms.)
- Make a decoction from the leafy branches as a remedy for upper respiratory infections, coughs, and fever.
- Eat a leaf or two in the morning to stimulate and improve the digestive system.
- Make an infusion from the leaves to add to your bath.

Silver Seaside Oxeye

Borrichia frutescens

FAMILY: Asteraceae (aster family)
MEDICINAL PART: Leaves, flowers
SOLVENT: Water, alcohol
PROPERTIES: Immune stimulant, antimicrobial, analgesic, anticancer

IDENTIFICATION

Silver seaside oxeye, hereafter called seaside oxeye, is a subshrub, reaching up to three feet tall, that forms extensive colonies along the brackish marshes and saltmarshes of the Carolinas. Seaside oxeye will easily catch your eye with its silvery, grayish green leaves, hence the common name silver seaside

oxeye. The fleshy three-nerved oblanceolate (wider at the leaf apex) leaves have an opposite leaf arrangement, and they have two lateral projections at the leaf base. Rub your finger at the leaf base and along the leaf margin to feel the tooth-like projections along the leaf and at the leaf base.

Once seaside oxeye starts to bloom, you will easily spot this wild herb. Scan brackish marshes for yellow daisy blooms from May through July, seaside's peak flowering period. The flowers, really called inflorescences, consist of ray florets and disk florets similar to a sunflower. The disk flowers mature into persistent achenes (seeds) that remain on the plant all winter. If you miss the peak flowering season, confirm your identification by looking for the spiraling brownish phyllaries (modified green sepals at the base of the flower) with spiny tips armed for dispersal.

RANGE

Seaside oxeye grows along the Atlantic coastline from Maryland south to southern Florida, west to Texas and Mexico. Introduced to the Grand Bahama, Cuba, and Bermuda.

HABITAT

Seaside oxeye grows predominately along brackish and saline marsh borders where it forms extensive colonies. As a climax species in saline coastal wetlands, seaside oxeye helps stabilize the substrate in high marsh areas. It occurs at the water's edge where it can tolerate periodic flooding events and high king tides. You can also find seaside oxeye growing in depressions between secondary dunes and vegetated flats and along the margins of wind-tidal flats.

HARVEST SEASON

June to October (aerial portion)

MEDICINAL USE

Seaside oxeye has a long history of traditional use in the Lowcountry of South Carolina, where a decoction of the leaves and flowers was used as a remedy for colds. Today few, if any, people in the Carolinas collect and use this wild herb as a cold remedy. However, the aromatic, bitter, pungent, and salty leaves communicate the medicinal properties of this coastal herb. The

leaves have a balsam-like bitter flavor, communicating, "I am medicine." Bitter herbs help stimulate the digestive system by increasing the secretion of digestive enzymes. They also help promote beneficial bacteria while decreasing harmful pathogens in the digestive system. The closely related, green seaside oxeye (*Borrichia arborescens*) has a long history of traditional use as an immune-stimulating and antimicrobial herb in Cuba and in the Bahamas. In Cuba, it is used for asthma, malaria, and chest complaints. In the Bahamas, a decoction of the leaves and flowers of green seaside oxeye is used as a remedy for colds, coughs, and back pain.

Many aromatic, bitter, and pungent herbs in the aster family are antimicrobial and have immune-stimulating effects on the body. Also, a decoction of the leaves and flowers relieves strained muscles, colds, allergies, and asthma. As silver and green seaside oxeye are closely related, silver seaside oxeye could be used as a remedy for the same ailments. Research on this wild herb has shown that it can have antimycobacterial and cytotoxic activity against breast and bladder cancers.

GARDENING AND LANDSCAPING

Once established, seaside oxeye can tolerate a wide range of soil conditions, from well-drained to moist soils. Seaside oxeye does require full sun to thrive. If you live near marsh habitat, there is a high likelihood that seaside oxeye occurs along the marsh border and is intermixed with other shrubs such as sea myrtle. Also seaside oxeye grows along roadside marsh habitats and along ditches. Encourage silver seaside oxeye to grow along the marsh by ensuring it has ample light by removing nonnative woody vines that may take over, such as Japanese honeysuckle, and by not "weed eating" the ditch/roadside vegetation. I recommend not removing seaside oxeye along the marsh, roadside, or ditch, so it can stabilize the upland marsh habitat and reduce erosion during hurricanes and high king tides. Plus seaside oxeye is a very attractive uniform subshrub growing to a maximum height of three feet. Thus, it won't block your view or interfere with visibility along the roadside. It will attract butterflies and other pollinators to your yard.

Seaside oxeye can be propagated by seed, underground rhizome division, and stem cuttings. Collect seeds in the fall and spread them across flats or containers. Water daily for seven days and then leave for the winter. Check to see if you have seedlings in the spring.

SEASIDE OXEYE IMMUNITY TEA

Bitter, salty, and slightly pungent, seaside oxeye tea will awaken and stimulate any palate. This tea brews a bright yellow color. I recommend making this antimicrobial, immune-stimulating tea late summer into the fall when cold and flu season begins. However, as seaside oxeye is an evergreen, you can make it any time of year. *Makes 1 serving.*

- 1½ cups water
- 1 heaping tablespoon chopped, fresh seaside oxeye leaves, rinsed
- 1 seaside oxeye flower

1. Add the water to a stainless-steel quart pot and bring to a boil. Once the water starts to boil, turn off the heat and add the chopped leaves. Cover with a glass lid and let the infusion steep for 20 minutes. After 20 minutes, the infusion should have transitioned to a nice yellow color.
2. Strain the plant material with a small handheld strainer placed on top a mug.
3. Add the flower to your mug. Enjoy in good health.

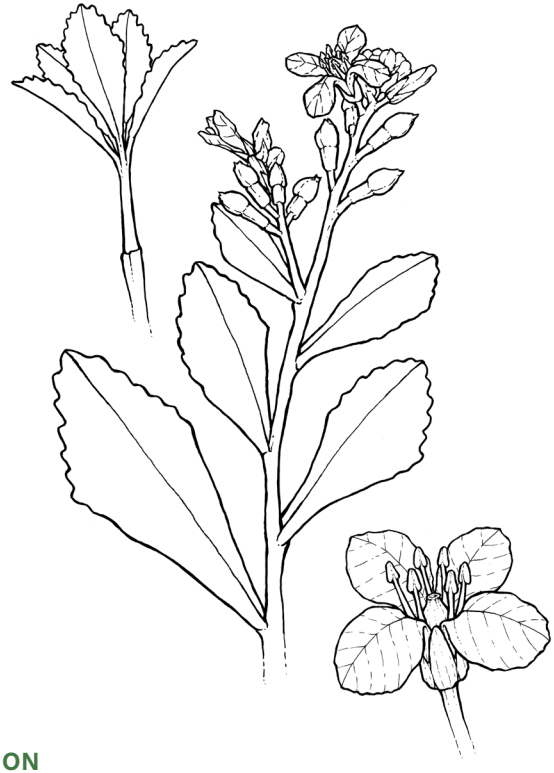
OTHER WAYS TO CONNECT WITH SILVER SEASIDE OXEYE

- Add a few fresh leaves to your salad.
- Pickle the leaves or add a few leaves to ferments, such as curtido.
- Make a simple appetizer with the leaves: Thinly slice apples or pears, add honey to the slice, and place one leaf on top. Enjoy.
- Dry leaves to add to immune-stimulating tea blends.
- Make a decoction of the leaves to add to your bath.

Southeastern Sea Rocket

Cakile harperi

RELATED SPECIES: Northeastern sea rocket (*Cakile edentula*)
FAMILY: Brassicaceae (mustard family)
MEDICINAL PART: Leaves
EDIBLE PART: Leaves
SOLVENT: Water
PROPERTIES: Diuretic, antiscorbutic, stomachic



IDENTIFICATION

Southeastern sea rocket, hereafter called sea rocket, is an annual succulent herb (six to twenty feet tall) with bright green, fleshy leaves that have a thick epidermis. The alternately arranged leaves are wider than long and coarsely toothed at the leaf apex. From April to June, the pale lavender to white four-petaled flowers appear and mature into water-dispersed corky dry fruit known as a silique. Sea rocket has bimodal

dispersal, with the upper fruit portion breaking off and being wind or water dispersed and the lower half staying near the mother plant and germinating if buried by enough sand. Sea rocket is a winter annual: Seeds germinate in the late summer or early fall, overwinter as small plants, and then flower and set seed the following spring and summer. Here I cover both northern and southeastern sea rocket, since the two are hard to tell apart and have similar medicinal qualities.

RANGE

Southeastern sea rocket is a southeastern coastal plain endemic species, meaning that it only occurs from eastern North Carolina south to Florida. Northeastern sea rocket, which has the same properties, occurs from Newfoundland south to North Carolina.

HABITAT

Look for sea rocket near inlets where rivers enter into the ocean and the beaches tend to be wider. Also look for sea rocket above the high-tide line and in the foredune habitat. I usually stumble upon sea rocket at beach state or county parks where there isn't as much foot traffic or beach maintenance. Sea rocket clumps occur scattered along foredune areas, often forming small sand mounds. Find a wide-angle view of the foredunes and scan for bright green clumps of this succulent herb.

HARVEST SEASON

April to October (leaves)

MEDICINAL USE

Sea rocket is primarily known as an edible plant, but food is medicine. As sea rocket occurs in the mustard family, the leaves have a classic pungent mustard flavor similar to arugula and wasabi. Sea rocket is often referred to as wild arugula due to the similar flavor profile and some species of *Cakile* are used as a wasabi substitute. Although not found in the literature for sea rocket specifically, a plethora of research on the Brassicaceae (mustard) family, reveals that the pungent flavor of many mustard plants makes them an appetite stimulant, digestive stomachic, and anti-inflammatory. The pungent flavor reduces congestion and mucous in the internal organs.

Overall sea rocket is known as a diuretic and was used as a remedy for scurvy, likely due to the vitamin C content in the leaves. The seeds of sea rocket contain high oil content, so it may be worth collecting seeds to experiment with making an anti-inflammatory oil.

Another important characteristic of many plants in the mustard family, especially wild plants, is that they contain glucosinolates, sulfur-containing compounds that help fight cancer. I am confident sea rocket contains a high percentage of glucosinolates given the pungent, bitter flavor that awakens the senses. One bite of the leaves and you will know what I mean.

As the foredune habitat for sea rocket is decreasing due to development, beach vehicle traffic, and the damming of rivers, I never forage more than a couple of sea rocket leaves. I want to keep seeing sea rocket on the beach more than I want to make a large salad.

GARDENING AND LANDSCAPING

Sea rocket can be propagated from stem cuttings or by seed. Plant in well-drained soil in an area that receives full sun. I haven't had luck with sea rocket cuttings, but I don't baby my plants. My next attempt to grow sea rocket will be from seed.

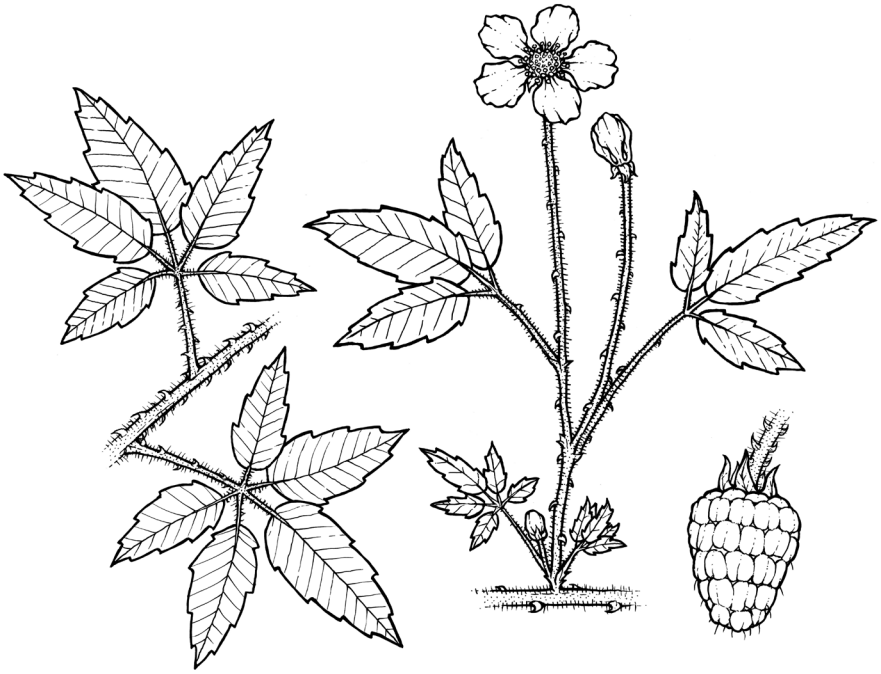
HOW TO CONNECT WITH SOUTHEASTERN SEA ROCKET

- Nibble a few leaves on the beach.
- Add several leaves to salads.
- Grind leaves to make a wasabi-like paste.

Southern Dewberry

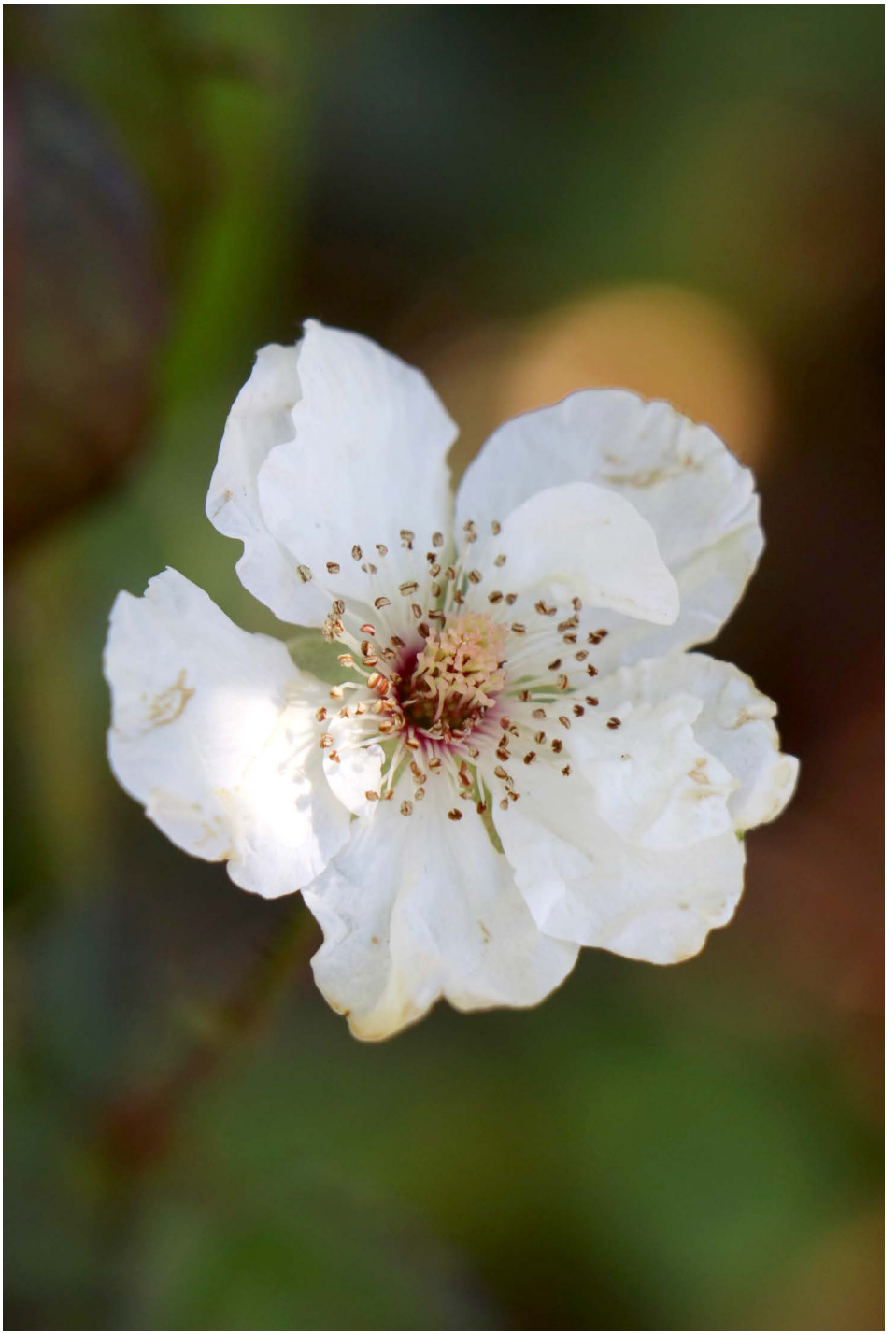
Rubus trivialis

FAMILY: Rosaceae (rose family)
MEDICINAL PART: Leaves, roots, berries
EDIBLE PART: Berries
SOLVENT: Water, alcohol
PROPERTIES: Antidiarrheal, astringent, antirheumatic, stimulant, tonic



IDENTIFICATION

You may step on southern dewberry before you see this wild herb, and if barefoot, you will know that this plant has dense hooked prickles along its stems. Southern dewberry is a low-growing, sprawling evergreen perennial herb with trifoliate leaves (three leaflets) to digitate leaves (five leaflets). The leaves are glossy above and pale green on the undersurface. As southern dewberry is one of the first native plants to flower in the spring, the best time to search for it is from March to April. The flowers have five white, showy petals and numerous stamens. The flowers mature into berries that look just like store-bought blackberries. The fruit is not a berry but an aggregate of drupelets,



known as aggregate fruit. The fruit is available from April to May. The sweet, juicy, black edible fruits are up to three-quarters of an inch long.

RANGE

Eastern Maryland to south Florida, west into Texas and Missouri.

HABITAT

Southern dewberry thrives in open areas with full sun on the edges of thickets, fences, and hedgerows. It prefers well-drained moist soil. If you live along the Carolina coast, there's a good chance southern dewberry grows in your yard because it likes disturbed conditions. You can also find it along roadsides, vacant lots, disturbed fields, and along trails in the maritime forest.

HARVEST SEASON

Year-round (leaves), April to May (fruit)

MEDICINAL USE

Most, if not all, plants in the *Rubus* genus have astringent leaves and roots because of tannins. The astringent properties of the leaves and roots help constrict, tighten, and bind loose proteins in the digestive system. Because of their astringent properties, a decoction of blackberry or southern dewberry leaves has long been used as a remedy for diarrhea. A root or leaf decoction can help relieve acute diarrhea or inflammation of the intestinal tract. Blackberry leaf tea is drying and should be used symptomatically for acute, not chronic, conditions and not continually. I recommend combining other nutritive herbs into a southern dewberry leaf tea blend, such as mulberry, nettle, chickweed, or plantain leaves. The nourishing and astringent herbs work synergistically to relieve acute digestive complaints such as diarrhea.

Southern dewberry has a long history of traditional use. In the Lowcountry, it was a standard practice to give the root decoction to infants and children up to three or four years of age for diarrhea. Also, foraged southern dewberry fruit was collected, eaten, made into a homemade wine, and used as a tasty beverage and medicine to relieve diarrhea. The leaves were used as a substitute for tea. The Cherokee chewed on southern dewberry roots to remedy a "coated tongue." Additionally, the Cherokee used the root as a tonic, a throat aid (honey added for a sore throat wash), and a hemorrhoid remedy for piles.

In Chinese medicine, blackberries are said to improve liver and kidney deficiency, helping to ease frequent urination and reduce lower back pain. Across traditions, the fruits of southern dewberry and all blackberries are valued for their exceptionally high antioxidant content, which helps repair cell damage caused by oxidative stress and inflammation. Southern dewberry plants produce either a lot of fruit or none at all in given years. Patience is key. I've had unproductive clumps go on to produce quarts of berries the following year. Don't give up on southern dewberry; with time, it will reward you with fruit.

GARDENING AND LANDSCAPING

Southern dewberry prefers full sun and moist, well-drained soil. In our yard southern dewberry thrives and produces fruit where it gets moisture along the edges of thickets, but can extend its canes out into the open, full sun "weedy" wild herb lawn. We have a four-foot southern dewberry cane that popped up in our main front bed against the house. At first I thought I would remove it, but it grew so fast that I let it be. Several years later, it started to produce fruit. Now, in early spring, I can forage dewberries right from my front steps. I recall a time my husband made pancakes, and he asked if I purchased berries from the store. I replied, "No, they didn't have any organic raspberries or blackberries at Harris Teeter." Then, I remembered, southern dewberry was fruiting outside our door. I went outside and foraged two cups of dewberries. My daughter ate more dewberries than pancakes that Saturday morning. I was one happy mom.

As I foraged those dewberries that morning, I reflected on how conditioned we are in America to automatically rely on the grocery store. As a botanist, ethnobotanist, and herbalist, I still went to the grocery store first for berries, not conditioned nor taught to turn to nature first for what I needed. So I believe that foraging and returning first to Mother Nature for what we need is part of deconditioning and remembering our divine connection with the Earth.

Southern dewberry is available commercially and can add value to any wild and native plant garden. The fruit provides a food source for songbirds, ground birds, raccoons, and mice. White-tailed deer browse the leaves and stems. Small mammals and birds disperse the seeds. I have noticed new southern dewberry plants popping in different corners of the yard. As long as they aren't lining a footpath, I leave them be, hoping they will bear fruit.

Overall southern dewberry is a must for any native and wild herb garden; chances are you already have it growing in your yard. I recommend encouraging its growth by cutting back nearby vegetation, especially nonnative invasive vines, such as Japanese honeysuckle, to promote new growth. Also you can build or buy a trellis and train it to grow upright, protecting those bare feet.

DEWBERRY DIGESTIVE EASE TEA

If you live along the Carolina coast, you can easily forage this nourishing and tonifying wild digestive tea blend. The plantain leaves help nourish the digestive system, while the southern dewberry will tighten and constrict the digestive tissue. The plantain leaves bring balance to the drying and constricting properties of southern dewberry to make this a synergistic blend for the digestive system. If you don't have plantain leaves, you can use marshmallow root or slippery elm as alternatives. Let the ingredients dry (it takes approximately 2 to 3 weeks to dry leafy wild herbs) after foraging. Then place the herbs in a grinder and then mix together to make the tea blend. Other herbs you can add to this blend include dried ginger root, dried sea myrtle leaves, or green cardamon pods. *Makes 1 serving.*

1 tablespoon of dried wild herbs: about 2 to 3 southern dewberry leaves and 1 to 2 English plantain leaves.
1½ cups water

1. Add one tablespoon of the dry leaf mixture to 1½ cups of hot water.
2. Steep for 10 minutes.
3. Strain.
4. Add honey or maple syrup to taste.

OTHER WAYS TO CONNECT WITH SOUTHERN DEWBERRY

- Nibble a few berries while gardening or in the yard.
- Harvest the leaves to dry for digestive tea blends.
- Make a jam or wine from the fruit harvested in the spring.

Spanish Moss

Tillandsia usneoides

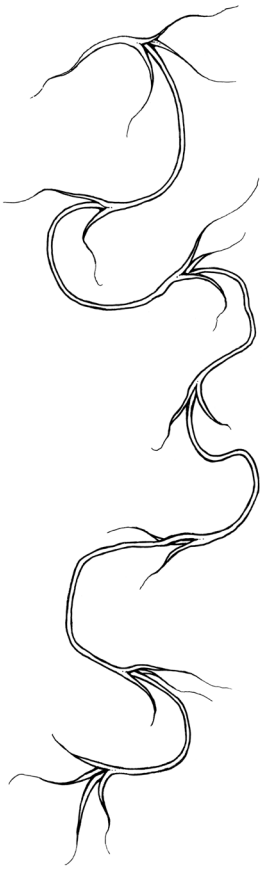
FAMILY: Bromilaceae

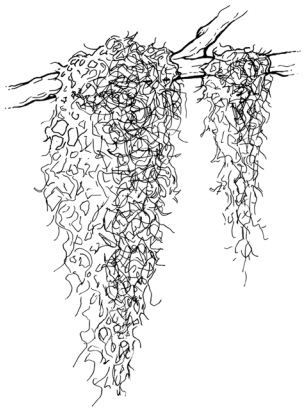
MEDICINAL PART: Leaves, stems

Solvent: Water

PROPERTIES: Anti-inflammatory, hypoglycemic, antidiabetic, anticancer, antiviral

Warning: Do not drink Spanish moss tea during pregnancy.





IDENTIFICATION

You cannot misidentify or overlook Spanish moss hanging from live oak trees along the Carolina coast. Spanish moss is classified as an epiphytic plant, which is a plant that grows on other plants but does not derive nutrients from their hosts. Spanish moss derives nutrients from air moisture, which is why it thrives around rivers, swamps, marshes, and ponds. It needs an average humidity level of 60 to 100 percent. In South Carolina it grows primarily on

oak trees, *Quercus* spp., predominately on the live oak (*Quercus virginiana*). However it can grow on many deciduous trees, such as elms, pecans, crepe myrtles, sweetgums, and on evergreens, such as longleaf pine and eastern red cedar. This plant forms long, grayish-green festoons (a chain of leaves or flowers) that adorn and beautify trees and shrubs. Silvery scales cover the leaf and stem surface, giving Spanish moss its grayish color. These scales open to capture moisture during rain events and close to conserve water during dry times. Often mistaken for true moss, Spanish moss belongs to the subtropical and tropical family Bromeliaceae. Look closely in the spring (April to June) for tiny flowers composed of three tepals arising from the axils of silvery leaves. Flowers reportedly have a light, pleasant smell at night.

RANGE

Spanish moss grows from southeast Virginia south to Florida and west to Texas. Outside of the United States, it occurs in Mexico, Central and South America, and the West Indies.

HABITAT

Spanish moss grows in areas with high humidity. In North Carolina, Spanish moss thrives where humidity levels are high, such as in swamps, but it can occur in dry forests and dry sandhill areas where it receives fog from the Cape Fear and Northeast Cape Fear River. Given the high humidity levels along the South Carolina coast, Spanish moss is nearly ubiquitous; you don't have to search long for this moss before you spot a live oak covered in festoons. However it is more common and easy to find it along tidal rivers and swamps with high humidity levels. Spanish moss grows well on live oak trees because the branches extend horizontally instead of vertically, allowing light to hit the branches. Thus, live oaks are the most popular home for Spanish moss in the South.

HARVEST SEASON

Year-round (aerial portion)

MEDICINAL USE

Who knew that Spanish moss, swaying and hanging from the branches of tall trees, could heal a sprained knee? I recommend adding it to your bath after

a long, tiring day to soothe all of the world's stresses away. Spanish moss is a beloved wild herb of the Carolina Gullah-Geechee community. While leading foraging walks, I have heard stories from members of the Charleston Gullah-Geechee community of how their grandparents placed green Spanish moss in their shoes to lower blood pressure or tying the green "moss" around their necks to relieve pain. Further, people would bathe in a strong Spanish moss decoction to relieve rheumatism and invigorate the body. Spanish moss was added to vinegar and mixed with clay to create a poultice for inflamed areas. The uses of Spanish moss have not been forgotten with time; thankfully there are still Gullah-Geechee people in South Carolina who connect with this wild herb's medicine, and hopefully the Gullah-Geechee connection to this plant remains strong throughout time.

Although never used as an official drug in the United States, Spanish moss is used medically in Mexico, Cuba, and Brazil. In Mexico, it is used to relieve a wide variety of disorders, including hemorrhoids, dandruff, digestive aliments due to overeating, body inflammation, epilepsy, gastritis, coughs, hernias, measles, ulcers, arthritis, and lung conditions, and it is also used to lower blood sugar levels. It is reported to accelerate childbirth and relieve infant epilepsy. In Brazil, a decoction of the entire plant is used to relieve rheumatism. Spanish moss is also used in rituals and religious ceremonies in Mexico and Central America. It is used as a decoration in nativity scenes in Mexico and placed underneath Christmas trees. It has become a decorative plant in Guatemala for religious and festive occasions.

Southeast Indigenous groups, such as the Creek, wore Spanish moss for clothing, especially the women, and Spanish moss was used in baby cradles. In Louisiana, the Houma Indigenous people make dolls from Spanish moss. Historically the Houma Indigenous people wove floor mats from the dead black strands of Spanish moss.

Along the Carolina coast, many people are afraid to touch Spanish moss due to the fear of chiggers. However, I have collected pounds of Spanish moss from the ground after storms without one chigger bite. Moreover, a study conducted on Cumberland Island in Georgia found other insect species, including springtails, ants, thrips, and sowbugs in Spanish moss, but no chiggers.

I primarily use Spanish moss externally; I make a strong decoction to add to my bath to help keep my body supple and young. Also I use a decoction as a facial toner (recipe follows).

GARDENING AND LANDSCAPING

If you live along the Carolina coast, try encouraging Spanish moss to grow on your trees and woody shrubs. Whether Spanish moss thrives or not depends on the humidity levels where you live. For example, I previously lived in a neighborhood where Spanish moss was everywhere because the community sits in ample humidity along the Wappo River. Now I live closer to the beach and there is less. One of my neighbors, the only lucky one with Spanish moss in the neighborhood, established it by routinely collecting the moss and throwing it over her live oak. Likewise, my sister-in-law, Stephanie, had success growing Spanish moss on her crepe myrtle in Kitty Hawk, North Carolina. So with enough patience, you can get Spanish moss to thrive on your trees and then connect with it for medicine when needed.

If you are ambitious, try growing Spanish moss indoors. In Australia, India, and the United Kingdom, Spanish moss is grown inside as an air plant. Hang the festoons vertically from old pieces of driftwood or shells. You will need to water it frequently, similar to other epiphytic plants. I currently have a nice strand of Spanish moss hanging from my showerhead.

SPANISH MOSS FACIAL TONER

If you want to feed your skin with what local Charleston esthetician Liz Munn calls a facial tea, make a Spanish moss toner. Once I read that Spanish moss was in patented skin care products, I experimented with this wild herb in my kitchen. I quickly made the toner and after application, visibly noticed an improvement in my skin texture and tone. So I began sharing the recipe with Wild Herb Academy students and now you.

The toner will only last one week unless you add a preservative or natural preservative such as ascorbic acid. Test a small area of your skin before applying. Other ways to use the toner/infusion, include using it to hydrate green or bentonite clay for masks, adding it to your bath, and don't forget you can drink it, after all it is a healing tea. Try sipping a half cup as a Spanish moss tea while you apply it as toner. *Makes 1 cup.*

1 cup water
½ cup Spanish moss, rinsed

1. Add water to a stainless-steel quart pot and bring to a boil. Once the water starts to boil, add the Spanish moss. Turn the heat off and cover

the pot with a glass lid. Let the infusion steep for 20 minutes. After 20 minutes, the Spanish moss infusion/toner will transition to a yellow color.

2. Strain out the Spanish moss. Allow liquid to cool.
3. After the liquid reaches room temperature, add to a glass spritzer bottle or small glass bottle. Spritz your face liberally with the toner or apply with a cotton ball.

OTHER WAYS TO CONNECT WITH SPANISH MOSS

- Grow indoors as an epiphytic air plant.
- Make a decoction from Spanish moss to add to your bath.
- Use the dead, black Spanish moss as fiber or twine to tie up your tomato plants, orchids, or anything else you need twine for in the garden.
- Place the green festoons in your shoes to lower blood pressure.

Spurred Butterfly Pea

Centrosema virginianum

FAMILY: Fabaceae
MEDICINAL PART: Leaves, flowers, roots
EDIBLE PART: Flowers
SOLVENT: Water
PROPERTIES: Emmenagogue (roots, flowers), laxative (seeds), slightly emetic (seeds), antioxidants (flowers), anthelmintic (seeds)

IDENTIFICATION

Look for a trailing perennial vine with scabrous, dark green trifoliate leaves. The scabrous upper surface of the leaves is like Velcro and will stick to your clothing or fingers upon touch. Spurred butterfly pea has no tendrils, so it wraps around other plants for support. Without a vertical structure, it will grow and trail along the ground. The stunning pale purple- to violet-colored

flowers will easily catch your eye with their large banner that looks like butterfly wings, hence the common name butterfly pea. The spurred part of the common name comes from the prominent keel in the flower's center. The keel of spurred butterfly pea encloses the reproductive parts of the flower. Unlike most legumes, its flowers are rotated 180 degrees, creating a landing platform for bees. They have a long blooming period from June until October, with a peak bloom in August. However, the blooms open only in the morning and wither by midday, lasting barely half a day.

RANGE

South New Jersey south to Florida, west to Kentucky, Missouri, Arkansas, and Texas.

HABITAT

Spurred butterfly pea grows in open areas with dry sandy soils such as pine forests, coastal uplands, along the edges of the maritime forest, vacant lots in urban areas, and along fencerows.

HARVEST SEASON

June to October (flowers)

MEDICINAL USE

The spurred butterfly pea instantly attracted my attention with the attractive purple flowers rotated 180 degrees. I had to know its scientific name, so, I keyed it out using the dichotomous key in the *Flora of the Southern and Mid-Atlantic States* by Alan Weakley, and learned that it was *Centrosema,* which is closely related to the genus *Clitoria.* The flowers of Asian pigeonwings, also known as butterfly pea flower (*Clitoria ternatea*), make a gorgeous antioxidant rich tea. Given the beautiful purple flowers of spurred butterfly pea, I had to see if I could make tea with this native wild herb. So, with gratitude, I collected a handful of spurred butterfly pea flowers, brought a pot of water to a boil, poured the steaming water over the flowers, eagerly waited fifteen minutes, and then added a teaspoon of lemon juice. Right before my eyes, the color of the tea transformed from a light green color to a hot pink. Spurred butterfly pea flower tea does not brew as vibrantly purple as *C. ternatea,* but it will brew a purplish to pink tea that you can make from

foraged flowers instead of store-bought ones (recipe follows). The color of the tea will depend on the intensity and color of the flowers you harvest.

Spurred butterfly pea flowers have antioxidants and polyphenols that may slow aging, lower the risk of chronic diseases, and improve skin, hair, and eye health. Spurred butterfly pea has a long history of traditional use in Cuba, Mexico, and Puerto Rico. In Cuba, a decoction of the leaves and roots is used as an emmenagogue to promote menstruation and induce uterine contractions. A more concentrated decoction of the same liquid is used as a vaginal douche. Also, a handful of the flowers and roots are decocted in good wine to make *medicamento magnifico* (magnificent medicine) to build the blood of anemic adolescents. One cup per day is taken. In northeastern Mexico, the Huastec Mayans crush spurred butterfly pea seeds to "treat" hair. In the Antilles, a poultice is made from the flowers to treat indolent tumors. Other reported uses include the seeds being used as an anthelmintic.

Other species closely related to spurred butterfly pea, such as spurred butterfly, also known as centro (*Centrosema pubsecens*), also have a long history of medicinal use. *Centrosema pubsecens* is used for wound healing in Nigeria due to its strong antimicrobial and antifungal properties. A peppered soup is prepared from the seed pod and given to women to help cleanse the womb after childbirth. In Laos, the seed sap of *C. pubscens* is used as an anesthetic agent for scorpion and snake bites. The leaves, high in protein, are used as food and fodder, and the leaf extract of *C. pubscens* is antimicrobial and has antioxidants.

GARDENING AND LANDSCAPING

The presence of spurred butterfly pea in a landscape symbolizes a well-naturalized coastal yard, one that supports biodiversity by providing essential resources for pollinators, wildlife, and even humans. Spurred butterfly pea supports the life cycle of two butterflies that I frequently see in our yard, the long-tailed skipper and the Southern cloudywing butterfly. The leaves of spurred butterfly pea provide nutritious food for the larval stage (caterpillars) of these two butterflies. In turn the caterpillars provide a food source for birds. Doug W. Tallamy, entomologist and conservationist, explains so well in *Nature's Best Hope: A New Approach to Conservation That Starts in Your Yard* that caterpillars are the most important food source for birds because they provide a highly nutritious and easily digestible food course

for young birds. Spurred butterfly pea also is an important food source for bumblebees and other bees that land effortlessly on the banner to feed on the nectar and pollen in exchange for pollination.

Spurred butterfly pea grows in several natural areas in our yard, including along the edge of the wild hedgerow that mimics the property line. Spurred butterfly pea prefers well-drained soil and full sun to partial shade. It will spread better in full sun because it will produce more flowers that will attract pollinators. Pollinators are ecothermic, depending on the sun's energy for warmth, so they generally visit areas with full sun exposure more in comparison to shady areas.

In our yard spurred butterfly pea grows on sea myrtle and intertwines with the wild muscadine vines, and I love watching the large bumbles pollinate it. Immediately before typing this paragraph, I spent twenty minutes watching and admiring the bee-spurred butterfly pea dance.

Spurred butterfly pea seeds require scarification for germination. Use sandpaper or a small knife and nick the seed. By rubbing the seed with sandpaper, you will create a small slit in the seed coat that will allow water to enter into the embryo (imbibition)—a necessary step for germination. Many plants in the pea family (Fabaceae) are adapted to fire and will germinate after being exposed to hot conditions. So another option to promote germination is to bring water to a boil, remove the water from the stove, and toss the spurred butterfly pea seeds into the water. Let them to sit in the water for 20 minutes to an hour.

I hope that you will let an area in your yard naturalize, and then one day spurred butterfly pea will surprise you with its presence along with many other wild herbs, pollinators, birds, and wildlife, including you.

SPURRED BUTTERFLY PEA FLOWER TEA

If you want to connect with your inner child, make spurred butterfly pea tea. The beautiful purple flowers are a lot of fun to forage. Make sure to leave some for the pollinators but recall the flowers only open for half a day, so don't feel too guilty for foraging them.

Once you return home, make the tea to witness the magical transformation of the infusion turning from a light green to a hot pink with the addition of lemon or lime juice.

If are unable to forage 15 to 20 flowers, make the tea with what you can forage. Depending on how many flowers you collect, the color of your tea may range from a light pink to a deep hot pink. The color of your final tea will depend upon the depth of color of the flowers you collect. If the flowers are a deep purple, you won't need as many for the recipe. *Makes 1 serving.*

- 1 cup water
- 15 to 20 spurred butterfly pea flowers
- 1 tablespoon lemon juice
- 2 teaspoons honey

1. Bring water to a boil. Then pour over 15 to 20 flowers. Steep for 20 minutes.
2. After 20 minutes, strain or remove the flowers, add one tablespoon of lemon juice and watch the color transform before your eyes.
3. Add honey to taste.

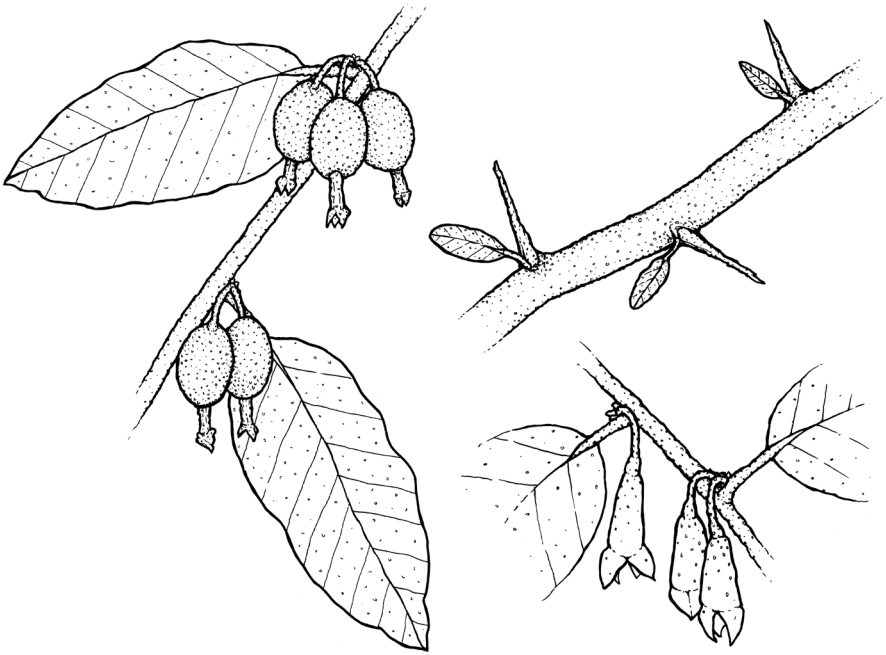
OTHER WAYS TO CONNECT WITH SPURRED BUTTERFLY PEA

- Harvest, dry, and powder the flowers to add color to your baking recipes.

Thorny Olive

Elaeagnus pungens

FAMILY: Elaeagnaceae (oleaster family)
MEDICINAL PART: Leaves, fruit
EDIBLE PART: Fruit
SOLVENT: Water, alcohol
PROPERTIES: Antitussive, expectorant, anti-inflammatory, astringent, antimicrobial, cardioprotective, antiasthmatic, antiulcer, anticancer (fruit), antidiabetic (fruit), antioxidants, antipyretic (flowers)



IDENTIFICATION

Look for a shrubby plant (up to twenty-three feet tall) with long arching branches with alternatively arranged elliptic leaves. A key identifying feature of thorny olive is the silverish-white underside of the leaves, which are covered in brown scales. The stems are covered densely with brownish scales as well. The fragrant tubular flowers you often smell before seeing appear from

October through November and mature into reddish drupes from February through March. The bright red fruit is covered with silver scales. This invasive nonnative shrub spreads by rooting at the tips of long arching branches and by fruit dispersal by birds.

RANGE

Thorny olive is native to Asia, including China and Japan. Planted as an ornamental, it escaped cultivation along the Atlantic Seaboard of the United States and is now a serious nonnative invasive plant in the southeast. It grows from Massachusetts south to Florida and west into Texas and Tennessee.

HABITAT

Look for thorny olive in urban coastal neighborhoods, disturbed areas, along fencerows, hedgerows, abandoned fields, beach paths, and dunes.

HARVEST SEASON

Year-round (leaves), February (fruit)

MEDICINAL USE

Thorny olive leaves, known as gangmu in China, are a traditional medicine for severe asthma, cough, bronchitis, and other respiratory disorders. A tea made from the leaves can help relieve asthma and chronic bronchitis. The flavonoids within the leaves contain antitussive and expectorant qualities, helping to reduce the frequency of coughs. Silver nanoparticles within the leaves have various health benefits, from being antimicrobial to antidiabetic to anti-inflammatory. I find it fascinating that the silvery scales on the underside of the leaves likely contain silver nanoparticles, which may account for many of the plant's health benefits.

In addition to the health benefits of thorny olive leaves, its fruit is a superfood because it contains a high concentration of antioxidants and carotenoids known as lycopene, which reduces free radicals in the body. Studies have shown that *Elaeagnus* fruit has lycopene levels multiple times higher than tomatoes. Also the fruit contains flavonoids, lipids, coumarins, phenolics, and ascorbic acid. Thorny olive fruit is considered anticancer given its high antioxidant content. Additionally, given the high antioxidant levels, the fruit helps protect the heart and reduces inflammation in the body. Lastly,

Elaeagnus fruit has been shown to have a rich assortment of minerals that our bodies need, such as magnesium and calcium.

Elaeagnus species worldwide, including *E. umbellata,* and *E. angustifolia,* have been used as food and medicine. The fruit is used to make juice, herbal teas, wine, soup, sauce, dessert, candy, pudding, fruit leather, jam, and jelly. In ancient Iran, a decoction made from thorny olive fruit was used as a remedy for asthma, jaundice, tetanus, and rheumatoid arthritis.

GARDENING AND LANDSCAPING

As thorny olive is widely abundant and taking over many natural areas, especially the maritime forests of the southeast, I *highly* discourage planting or cultivating thorny olive. In our yard, thorny olive grows along an old hedgerow that was there before we moved. It grows amongst a mixture of Chinese privet, wax myrtle, eastern red cedar, Japanese honeysuckle, muscadine grape vines, and a few camphor saplings. It is a nonnative invasive thicket interspersed with a few native wild herbs. As I don't use herbicides, I have been slowly removing/reducing the nonnative invasive plants, including thorny olive, and encouraging native wild herbs, such as sassafras along the hedgerow.

The best thing to do with thorny olive is to find a wild patch you can visit and forage the fruit. I found *huge* thorny olive shrubs growing in one of the oldest suburban neighborhoods in Charleston. I go back every year to forage the fruit. If you live along the coast, I am confident you can find thorny olive to forage without planting it in your yard.

ANTIOXIDANT-RICH THORNY OLIVE FRUIT LEATHER

I was intimidated the first time I made thorny olive fruit leather. Thankfully I soon realized that making fruit leather is easier than it seems and is a lot of fun. Also, I learned you want to double the recipe or make more soon after because fruit leather doesn't stick around long. When you forage thorny olive,

forage as much as you can because it is an invasive nonnative and disrupts the natural ecosystem processes of coastal natural communities such as the maritime forest. You want to get every thorny olive fruit you can. If you can't forage enough to make this recipe, add any fruit from the grocery store, such as pears or apples. *Makes 4 to 6 servings.*

8 cups of thorny olive fruit, rinsed
½ cup water
3 tablespoons honey

1. Preheat your oven to its lowest temperature and line two 9 × 13-inch baking sheets with parchment paper.
2. Add the fruit to a stainless steel quart pot along with the water. Simmer on medium high heat. You don't want the water to boil, but you want the berries to soften and the seeds to release from the skin. Don't walk away from the pot during this process. Use a wooden ladle or a potato masher to mash the fruit to aid the release of the seed. After about 8 to 10 minutes, the fruit should be liquified and more of a homogenous mixture. At this point, turn off the heat.
3. Use a food mill or fine mesh sieve to remove the large beige seeds in the mixture.
4. Add honey to taste.
5. Slowly pour the fruit mixture onto the prepared baking sheets at a thickness of ⅛ to ¼ inches.
6. Bake until the fruit leather is no longer sticky and easy to remove from the parchment paper. I baked mine for about four hours at my oven's lowest temperature. Depending on your oven, it could take up to 10 hours.
7. Once the fruit leather is done, use a pizza cutter or knife to cut the leather into sections. Then, roll the fruit leather into fruit rollups and store in an airtight container.

OTHER WAYS TO CONNECT WITH THORNY OLIVE

- In February through March, forage and eat the fruit raw.
- Dry the fruit to use in herbal infusions.
- Make a thorny olive jam or jelly.
- Make a tea from the leaves for respiratory issues.

Wax Myrtle

Morella cerifera

OTHER COMMON NAMES: Bayberry, Tallow Shrub, Muckle Bush
FAMILY: Myricaceae (bayberry family)
MEDICINAL PART: Leaves, root bark
SOLVENT: Water, alcohol, oil
PROPERTIES: Astringent, antimicrobial, stimulant, diuretic, antispasmodic (leaves)

IDENTIFICATION

Look for a medium shrub to small tree with evergreen aromatic, dark green leaves that are four to six times long as wide. The key identifying features for wax myrtle include golden-colored resin dots on the underside of the leaf and a pleasant, spicy lemon-pepper aroma released when you crush the leaves. Wax myrtle is diecious, meaning female and male flowers occur on separate plants. Wax myrtle flowers in the spring and fruits in the fall. The

male flowers are yellow and cylindrical, up to one inch long. Female flowers mature into fruit that reside below the current year's growth on last year's growth. The fruit appears "granulated" because the bony seed is studded with tiny black particles overlaid with greenish-white wax, resulting in a bluish appearance. The fruit may persist on branches for two to three years.

RANGE

New Jersey south to Florida and west to Texas. Widespread in the coastal plain of the southeastern United States, southeastern Mexico, The Bahamas and the Greater Antilles.

HABITAT

Look for wax myrtle in the maritime forest, along brackish marshes, salt-marshes, and dune and interdune swale systems. You can often find it along beach trails leading to the ocean in South Carolina. Keep your eyes open for it along fencerows where the mower hasn't been able to reach. Several large wax myrtle shrubs grow naturally along our hedgerow.

HARVEST SEASON

Year-round (leaves), November to January (fruit)

MEDICINAL USE

I could write a lengthy book about the historical medicinal use of wax myrtle. In the 1800s wax myrtle was considered one of the most valuable herbs in the medical herbal practice. The leaves are highly antimicrobial and astringent, bringing quick relief to dysentery caused by unclean water, making it a valuable herb during an era when clean drinking water was scarce. Porcher (1869) notes that "the root is a powerful astringent, and a decoction is employed in diarrhea, dysentery, hemorrhage from the uterus, in dropsies which succeed fevers, and as a gargle in sore throat" (p. 354). Wax myrtle leaves contain many antimicrobial essential oils, including terpinenes, pinene, eugenol, myrcene, and cineole. I always add a few leaves to stove-top herbal decoctions to relieve viral or bacterial infections. I also consider wax myrtle leaves to be the best coastal wild herb for relieving urinary tract infections due to the antimicrobial and diuretic properties. However I recommend adding other wild herbs to the tea blend, such as calendula petals or marshmallow

root to soothe the inflammation of the bladder lining. You don't have to have an infection to enjoy wax myrtle tea, in the 1800's wax myrtle tea was a popular tisane. Wax myrtle is a potent diuretic, moving water through the body, so if you try wax myrtle tea, be sure to have a large glass of water afterwards.

Before the advent of electricity wax myrtle berries provided a treasured commodity. One-third of the berry contains wax made of vegetable oil. The wax was used to make bayberry candles and soap, with the addition of lye. Bayberry candles burned cleaner and smelled much better than tallow candles and were imported to England for a hefty price. Although we have electricity today, if you live along the coast, you must make a bayberry/wax myrtle candle once in your life. It is a timeless tradition and a great activity for the whole family. There is an old saying that if you burn a bayberry candle on Christmas Eve or New Year's Eve, you will have good luck throughout the year: "This bayberry candle comes from a friend, so on Christmas Eve burn it down to the end. For a bayberry candle burned to the socket, will bring joy to the heart and gold to the pocket." The wax is brittle, so I recommend adding beeswax to make the candle more solid.

Other traditional uses of wax myrtle include using the leaves for flavoring soups and as a substitute for hops. The leaves have been placed over meat to keep flies away and strewn around dooryards, beds, and chicken houses to repel fleas. They contain a high tannin content and were also used to tan leather.

GARDENING AND LANDSCAPING

If you live along the coast and within the range of wax myrtle, having a shrub in your yard is a must! Wax myrtle is an important food source for many birds, including the yellow-rumped warbler, eastern bluebird, northern mockingbird, gray catbird, cedar waxwing, brown thrasher, and many others. The fruit, high in fat, sustains wintering migratory birds and year-round resident birds in the maritime forest and saltmarsh habitat along the coast. I love watching the yellow-rumped warblers that brighten our yard in the winter, and according to the Merlin app, the other birds listed above do as well.

Wax myrtle shrubs make a great hedge or can be used as a privacy fence. If your yard has a grass only fence line, plant several wax myrtle shrubs and interplant with native coastal herbs. Several wax myrtle shrubs, likely dispersed by a bird, sprouted at our foundation. As they are evergreen, I am

letting them grow. I personally think wax myrtle makes an excellent shrub for planting near a home's foundation. A landscaper once advised me against it because the plant is relatively short lived, typically lasting only thirty to fifty years. To me, that's plenty of time, and when one wax myrtle dies, I trust another plant will rise to take its place. As they reproduce asexually by runners, new sprouts will likely surface. The wax myrtle shrubs are near the foundation of our home, along with sea myrtle and bay trees. In front of the native wild herb shrubs are large wild herb beds that flank the pathway to our house. I love seeing the wax myrtle daily when I walk outside our door.

After I made wax myrtle candles, I had many seedlings sprout where I dumped the refuse material. The seeds likely were scarified by the boiling water, and this increased germination. So, you too can propagate your own wax myrtle shrubs after making candles from foraged fruit by carefully discarding the seeds in an area where you want them to grow or in a raised bed where you can transplant them later. Another option is to take softwood cuttings in the spring and dip the end of the stem with rooting hormone powder. Wax myrtle will thrive in open sun conditions to partial shade in well-drained soil.

ANTIMICROBIAL WAX MYRTLE TEA

If you love tea that is high in tannins, such as green tea, you will love this recipe. Wax myrtle is a strong diuretic, so make sure to drink a large glass of water after drinking this tea.

To prepare, forage several small branches in the spring and summer before the shrub produces fruit. To dry the branches, lay them flat on screens or place four to five in a brown paper bag, taking care that they don't overlap too much. After approximately fourteen days, the wax myrtle leaves should be dry. Remove the leaves from the stems and place in a blender or spice grinder to crush and powder. Store the dried leaves in a glass jar. *Makes 1 serving.*

- 1 teaspoon dried powdered wax myrtle leaves or 1 tablespoon of fresh chopped wax myrtle leaves
- 1 cup water
- 2 to 3 bay leaves
- 1 teaspoon honey (optional)

1. Add one teaspoon of the dry, powdered leaves or 1 tablespoon of fresh, chopped leaves to a mug.
2. Pour hot water over and let sit for 10 minutes.
3. Strain the leaves and enjoy.
4. If desired, add honey to taste.

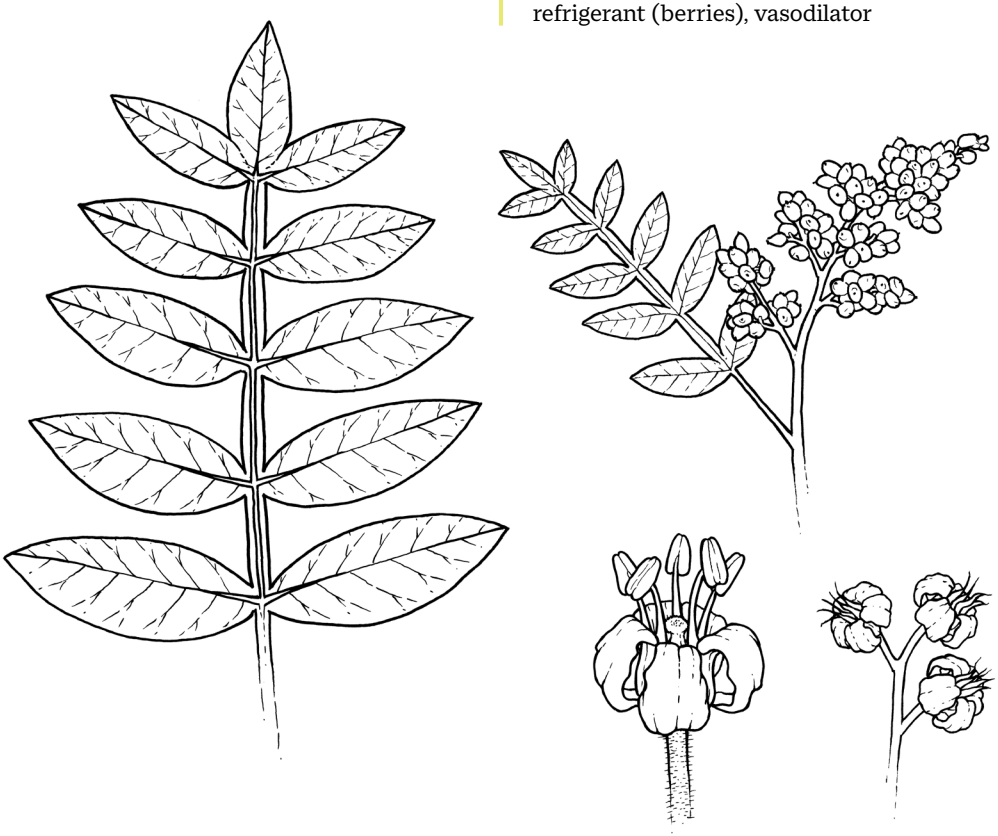
OTHER WAYS TO CONNECT WITH WAX MYRTLE

- Flavor soups and stew with wax myrtle leaves.
- Add to yaupon tea blends.
- Make an astringent leaf decoction to add to your bath.
- Make a candle (find video instructions on my YouTube channel, "Wild Herbs with April").
- Use the wax for soapmaking or salves.
- Add the fruiting branches to dry floral arrangements or fall herbal wreaths.

Winged Sumac

Rhus copallinum var. *copallinum*

FAMILY: Anacardiaceae (sumac family)
MEDICINAL PART: Leaves, root and stem bark, fruit
SOLVENT: Water
PROPERTIES: Antioxidants (fruit), antimicrobial (fruit, stem bark, leaves), antiviral, anti-inflammatory, anticancer, refrigerant (berries), vasodilator



IDENTIFICATION

With red clusters of fruit and reddish to orange winged compound leaves, you can't misidentify winged sumac in the fall. Look for a small deciduous tree, reaching eighteen feet tall, with a straight, slender tree trunk with few branches. Winged sumac has compound leaves with eleven to twenty-five leaflets covered in dense hairs on the undersurface. Vegetative tissue

extends along the leaf midvein, giving it the appearance of being winged, hence the common name winged sumac. The leaves are three times long as wide. Panicles of white to greenish flowers appear in late spring. The flowers mature into gorgeous dark red panicles of drupes that persist on the trees throughout the winter.

RANGE

New York south to Florida west into Texas, in the Carolinas, it grows mainly along the coast and the piedmont.

HABITAT

Along the Carolina coast, you can easily find winged sumac within the remnants of the once extensive maritime forest. You can spot winged sumac along fencerows where the mower cannot reach and within old fields that are no longer maintained. Winged sumac occurs along roadsides and hedgerows.

HARVEST SEASON

September to October (fruit)

MEDICINAL USE

Across the globe, humans have acknowledged and received benefits from the medicinal properties of sumac. All parts of the sumac from the fruit, leaves, roots, and stem bark, have provided value to humans. Winged sumac and many other sumacs, such as *Rhus chiensis*, and *R. coriaria*, have been used as medicine.

The most famous part of the tree used is the berries. The fruit contains a high amount of vitamin C and has been used for food preservation. The fruit also contains vitamins A and B and antioxidants. You may be familiar with the popular Middle Eastern spice za'atar, made with Sicilian sumac berries (*Rhus coriaria*), or sumac lemonade. With more than two hundred phytochemicals and a high antioxidant content, you could say that sumac berries are a superfood. Phytochemicals extracted from sumac fruits include flavonoids, isoflavonoids, tannins, terpenoids, and anthocyanins. The fruit contains malic and ascorbic acid. The high antioxidant levels and malic and ascorbic acid have made this fruit a popular choice for preserving and flavoring food. The fruit has also been used as a remedy for sore throats

and to relieve fevers. Sumac berries are considered antimicrobial and anti-inflammatory. Given the high antioxidant content, sumac berries slow aging, and studies have shown that adding sumac berries to your diet can reduce your risk of colon cancer. Just as the berries help preserve meat and other food, the berries also help preserve our bodies.

Beyond the high-antioxidant berries, sumac leaves and root and stem bark have a high tannin content. Tannins are plant phytochemicals that are astringent and antimicrobial. They help the tissues in the body constrict and help flush harmful bacteria and viruses. Sumac leaf, fruit, and root bark have been used across the globe to relieve dysentery (loose stools). The Creek made a decoction of the roots to relieve diarrhea. Other reported Indigenous uses of winged sumac include root bark decoction for urine retention. Also, the Seminole and the Delaware used a decoction of the bark as a venereal aid. A bark decoction has been used for viral eye infections, boils, and other skin eruptions. Smooth sumac (*Rhus glabra*) root bark was used as a hemostatic.

The high tannin content in sumac leaves makes is a great mordant for fixing natural dyes, and was used to dye or "tan" leather hides in the 1800s. Also, the boiled fruit was used to dye wool black. Porcher notes "sumac berries in layers with wool and boiled will dye black without copperas" (p. 241).

I haven't worked with the leaves, stems, or root bark yet. However, I have worked with sumac berries, and that is the perfect place to start connecting with this small tree and learn it's medicine. The berries can easily be harvested and prepared in a spice or lemonade (recipe follows).

GARDENING AND LANDSCAPING

My yard wouldn't be what it is without the large stand of sumac, approximately 100 individuals plus, that serves as a living screen along the west side of our yard. From spring to winter, the winged sumac trees delight my senses. I enjoy watching the pollinators swarm in large masses when the flowers blossom in the spring. In the early morning, I watch birds hide within the sumac hedge, fluttering out to take a dip and sip in the bird bath selectively placed outside the hedge. While I type this, I am delighted watching catbirds frolic around the sumac trees. Pure joy! From late fall to winter, I witness the leaves turn bright red and feel like I am gifted my own spectacular fall leaf show.

If you live along the Carolina coast, I encourage you to plant a winged sumac tree in a sunny, well-drained location, either in the southern or western area of your yard. As sumac can quickly spread by root suckers, plant in an area where you need a living screen or in a naturalized area where sumac can form a small stand. Several sumac trees will attract more birds to your yard, and you'll have more fruit to forage in the fall.

You can propagate sumac from stolon root cuttings—simply cut the root from the mother tree, plant it in a pot, and wait for it to grow. Fall or early spring is the best time to plant winged sumac. I believe that winged sumac belongs in every full-sun Carolina coastal garden, especially in butterfly, native, wild herb, and pollinator gardens.

Beyond its medicinal value, winged sumac is a larval host plant for the red-banded hairstreak (*Calycopis cecrops*) and the luna moth (*Actias luna*). Songbirds, white-tailed deer, opossums, wild turkeys, and quail eat the fruit and rabbits eat the bark. As I live in Charleston County, on a 0.7-acre lot, I only see songbirds, particularly warblers and catbirds, spending a lot of time in the sumac bushes. The sumac hedge not only provides cover and food for me but also provides essential shelter for the songbirds amongst the monoculture grass lawns of the city.

SUMAC LEMONADE

Sumac berries make the best pink lemonade. No artificial coloring or ingredients; the natural red color of the berries transfuses into the water as a pretty pink color. The malic and ascorbic acid pack a natural sour punch that lemonade in the grocery store can't rival. Add a little honey or raw organic cane sugar to get your kids to enjoy. I typically add one teaspoon of honey per cup of sumac lemonade. Sweeten to taste. Enjoy! *Makes 2 servings.*

1 cup sumac berries
2 cups water
2 tablespoons honey or to taste

1. De-stem the sumac berries. You will have sticky sour fingers after de-stemming the berries. If you're brave, lick your finger to experience the sumac mouth pucker.
2. After de-stemming the berries, add the water to a high-power blender and 1cup of the sumac berries. Blend on high for 60 seconds.
3. Sweeten to taste.

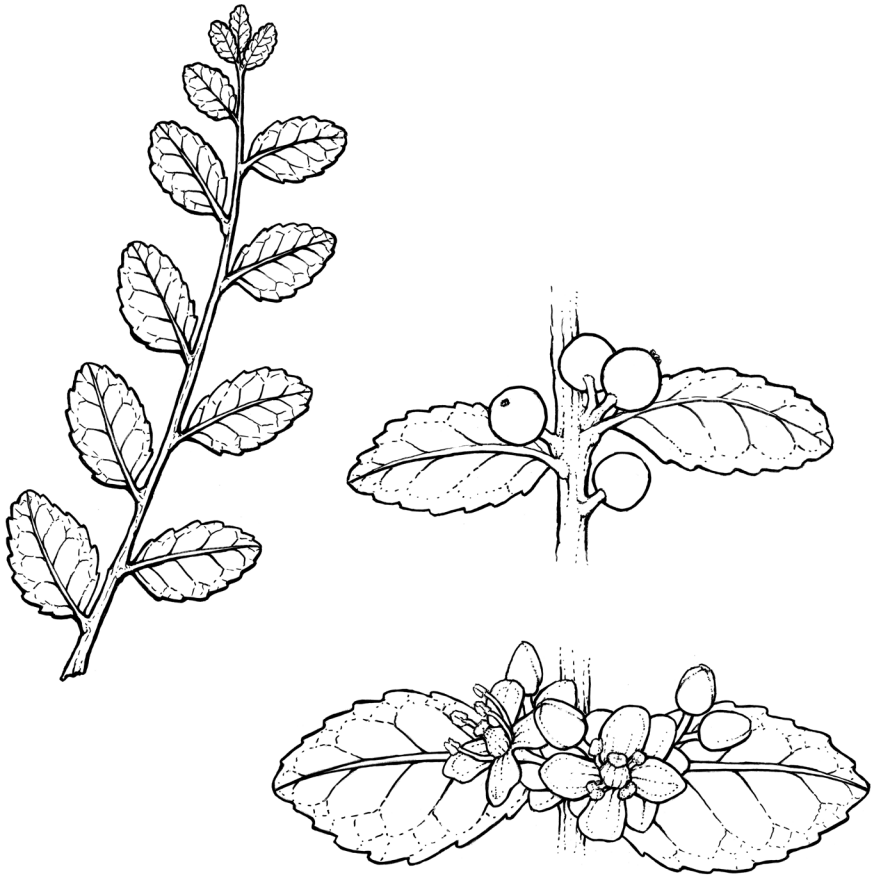
OTHER WAYS TO CONNECT WITH WINGED SUMAC

- Use tannin-rich leaves as a mordant for natural dying.
- Grind the dried fruit to use as a seasoning or to make a za'atar spice blend.
- Use the red berries for natural dying, Liz Spencer, founder of Dogwood Dyer, uses the berries in bundle dying to impart red speckles throughout her natural dye pieces (check out dogwooddyer.com).
- Add dried leaves to supportive digestive tea blends to help with loose stools or to blends for women with heavy menstruation.

Yaupon

Ilex vomitoria

FAMILY: Aquifoliaceae (holly family)
MEDICINAL PART: Leaves
SOLVENT: Water
PROPERTIES: Diuretic, immune stimulant, stimulant, diaphoretic, anti-inflammatory



IDENTIFICATION

An evergreen small tree or shrub (five to twenty-five feet tall) in the holly family that forms dense, almost impenetrable thickets along the Carolina coast. Diagnostic features include evergreen, leathery elliptic leaves (widest at the middle) with crenate margins (margin edged with rounded teeth that point forward). Look for small leaves (three to four centimeters long)

with a glossy upper surface and a pale green undersurface. Also, look for a shrub with tightly, alternately arranged leaves along the stems. In the winter, yaupon has red-tipped young stems while the older stems appear a grayish to light beige color. Male and female flowers occur on separate plants (dioicous). Look for small white flowers with four petals in the spring. The flowers mature into red to yellow holly berries in the fall from October to November and remain on the plant throughout the winter. When yaupon fruits it is hard to miss the beautiful red berries that many people use to decorate their mantles and homes for the holidays.

RANGE

Yaupon is a southeast endemic species, meaning it only occurs in the southeast, occurring from Norfolk, Virginia, south to Florida and west into Texas.

HABITAT

Along the Carolina coast, yaupon is a dominant species in the maritime forest, growing in dense colonies underneath live oaks and other oak species. Also, it grows along the dune system and swales and can easily be found along most sandy beach paths. You can also find yaupon growing along brackish and saltwater marshes. Yaupon can persist in disturbed habitat along fencerows in urban and suburban areas. Yaupon prefers full sun to part shade and can grow in a wide range of soil conditions from dry to wet. It is a highly resilient shrub that can withstand salt aerosols.

It occurs predominately in well-drained sandy soils along the coast such as maritime forests, sand dunes, and fencerows. Also, it occurs along pond margins, the upper edges of brackish marshes, saltmarshes, and nontidal forested wetlands. It occurs along roadsides as well and can be found easily within a mile from most homes across its range.

HARVEST SEASON

Year-round (leaves), but my favorite time to harvest the leaves for tea is June.

MEDICINAL USE

Yaupon is the only caffeinated plant in North America; the leaves have 0.32 to 1.67 percent caffeine. The leaves are also loaded with antioxidants, saponins, vitamins, polyphenols, and minerals. This mighty tea can help regulate

weight, lower blood cholesterol, lower blood sugar levels, protect one from getting a cold, and is considered anticancer for lung and colon cancer. If that wasn't enough to give yaupon a try, this tea can help enhance the mood due to the phytochemical theobromine, the same substance in dark chocolate that makes people come back for more. Yaupon is an amazing tea, a super tea, that everyone should enjoy, especially people who live across its range.

The southeast Indigenous people of North America (Turtle Island) were the first to collect and use yaupon. Yaupon is a revered and sacred herb for many Indigenous people along the coast, especially the Creek. Historically yaupon reportedly helped to cleanse away sins, return innocence, ensure harmonious friendship/communion, and give soldiers prowess during wars. Indigenous people consumed yaupon tea, especially in the winter, daily the same way most Americans today drink tea or coffee in the morning. They also held sacred ceremonies with yaupon such as the green corn ceremony. The leaves were roasted over a fire and boiled for several hours until the tea turned a dark, black color. Several other herbs were added as well, such as lizard's tail, rattlesnake master, that likely in combination produced an emetic effect. During ceremonies the strong tea known as "black drink" was poured in a lightening whelk, emperor helmet, or a horse conch shell. They would drink several glasses to induce vomiting for purification rites. The early naturalist John Lawson, who explored the Carolinas in the early 1700's, documented the plant in his travels, wrote, "This *Yaupon* call'd by the *South-Carolina Indians, Cassena,* is a Bush, that grows chiefly on the Sand-Banks and Islands, bordering on the Sea of Carolina" (1967, p. 96). The green corn ceremony also known as the busk ceremony is still practiced by the Creek people in mid- to late summer.

In the 1840s in Mount Pleasant, South Carolina, two yaupon tea plantations (Jouette Cassena Tea Plantation and Sheraton Plantation) sold yaupon tea commercially, but both failed due to competition from oriental teas and maté.

Overall yaupon contains a rich assortment of saponins, antioxidants, polyphenols, vitamins, and minerals that make it a healthy caffeinated tea choice. Yaupon contains more saponins than green tea, black tea, or yerba mate. Saponins have many health benefits, including being antiallergic, antifungal, anti-inflammatory, antimicrobial, antispasmodic, antiviral, diuretic, chemopreventive, antiulcer, and anti-obesity, and they help lower blood

pressure and blood sugar levels. Given the beneficial properties of yaupon, it is not surprising that yaupon was traditionally used to relieve diabetes, colds, gout, smallpox, and to expel kidney stones. The leaf decoction was also used to bathe feverish patients in the Lowcountry, and brackish water was purified in North Carolina by boiling yaupon leaves.

Why and how more people in America know and have tried yerba mate (*Ilex paraguariensis*), a tea to native to South America, than our own native mate, known as Yaupon, is dumbfounding. In America we have a $203 million yerba mate industry. In a Florida undergraduate study, a blind taste test of yerba mate and yaupon was conducted and participants preferred the taste of yaupon. Nothing compares to a fresh cup of yaupon tea.

GARDENING AND LANDSCAPING

For the longest time, I didn't think you could transplant a wild yaupon. Until when one day I rescued a young yaupon sapling from the Seafields at Kiawah Island before its development. It was in the fall, and I immediately transplanted it to our front yard adjacent to a shell and gravel foot path. As I had several failed attempts at transplanting, potting, and growing yaupon from wild stock before, I was shocked when I noticed new growth on the yaupon rescue. To this day, I admire the yaupon every time I arrive home. During the holidays I hang ornaments on it, and it has become my favorite plant in the front yard because it represents hope, perseverance, and resilience.

From my experience, if you live along the Carolina coast, it is easier to find yaupon in your yard than to transplant a wild one. Yaupon has a clonal growth form, sending up new shoots from root suckers. Look for yaupon growing underneath live oaks (*Quercus virginiana*). There are two grand live oaks in the backyard and in the past, someone planted camellia and azalea bushes underneath them. They became overgrown and from afar you wouldn't think that yaupon could persist among the nonnative shrubbery. However, once I kneeled down and looked closely, I spotted several yaupon babies. So you may get lucky and find a native yaupon growing in your yard after you look closely at the vegetation.

Yaupon grows well in full sun to partial shade, it prefers well-drained soil. There are several varieties that you can buy from nurseries. However I recommend trying to find a wild native source to grow or rescuing a young shrub/sapling from development in the fall and transplant to your yard.

CINNAMON-PEACH YAUPON TEA

If you live in the South, foraging and making yaupon tea is a must do. It is *super* easy and anyone can do it. My favorite time to forage and make fresh yaupon tea is in June. The yaupon has new growth perfect for foraging, and it is a gorgeous time of year to be outside. Plus, peaches are in season and combine perfectly with yaupon. Add a pinch of cinnamon and honey to taste, and you are in for a real treat. I love this recipe so much, especially iced, that I have given it to city workers and neighbors, highlighting the amazing taste and feel of native yaupon tea. When something tastes so good, you have to share it! To make this tea, forage with gratitude from the plant, three to four yaupon twigs approximately six to twelve inches in length. You goal is to have two tablespoons of powdered yaupon leaves. *Makes 4 to 6 serving.*

3 to 4 (6-inch) yaupon twigs, new growth
1 to 2 Carolina or Georgia peaches
2 teaspoons cinnamon
4 cups water
Honey or agave syrup to taste
Pint glass mason jar

1. Preheat your oven to 250 degrees.
2. De-stem the yaupon twigs. Add the leaves to a baking pan, or two baking pans. Ensure the leaves aren't overlapping too much.
3. Toast the leaves in the oven for 15 to 20 minutes, until you start to smell the yaupon leaves and they feel slightly crispy. You should notice that the leaves start to turn a dark green to brown color.
4. Remove the pan(s) from oven and allow to cool.
5. Once cooled, add them to a spice or glass blender and pulverize for 60 seconds. Your goal is to expose the surface area of the leaf to the water. More surface area to water, better the tea.
6. Add 2 tablespoons of powdered yaupon leaves to the jar, half a peach, and 1 teaspoon of cinnamon.
7. Bring water to a boil.
8. After boiling, carefully pour the hot water over the yaupon leaves, sliced peaches, and cinnamon. Make sure your glass mason jar is room temperature, so the glass doesn't break when you pour the hot water over the yaupon leaves.

9. Brew covered for 20 minutes.
10. Once the tea nears room temperature, add 1 tablespoon of honey.
11. Place in the refrigerate until cold.
12. Serve with 1 or 2 cubes of ice, if desired. You don't want to water down this tea.
13. Enjoy with friends!

OTHER WAYS TO CONNECT WITH YAUPON

- Make an infusion from the leaves to use as a facial toner. The high antioxidant content of the leaves can tighten the skin and keep it healthy.
- Use fruiting female yaupon branches in the winter to decorate your home.

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About the Author

APRIL PUNSALAN is the founder of Wild Herb Academy and a lifelong devotee of the plant world. With more than twenty-eight years of experience in herbalism and botany, her path weaves together academic study and ancestral wisdom. She holds a two-year degree in horticulture, a Bachelor of Science with an emphasis in botany, a traditional herbalism certificate, and a Master of Science with an emphasis in botany. For more than ten years, April protected rare and federally endangered plants with the US Forest Service and the US Fish and Wildlife Service. Beyond her formal education and roles in government agencies, she has spent thousands of hours in direct relationship with wild plants—listening, harvesting, and preparing medicine in rhythm with the seasons.

When not immersed in the plant world, she enjoys life with her husband, Vasily, and daughter, Annarose. Her passions include Ayurveda, Kundalini yoga, gardening, and dancing. She lives in Charleston, South Carolina, where she leads foraging walks and helps others reconnect with the healing intelligence of the Earth through her work at Wild Herb Academy.

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